

***Commonwealth of Virginia
Department of Environmental Quality***

***Technical Support Document
For The Redesignation Request and
Maintenance Plan For The
Richmond-Petersburg 8-hour Ozone
Nonattainment Area***

Final

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Commonwealth of Virginia Technical Support Document

1. Introduction

The following sections provide detailed information on the point, area, non-road, and mobile source emission estimates used in the request for re-designation to attainment and the ozone maintenance plan for the Richmond-Petersburg non-attainment area. The sections below provide information on growth factors used to project emission inventories as well as methods used to determine the growth factors.

2. Emissions Summary

The table below, Table 2-1, provides a summary of the 2002, 2005, 2011, and 2018 emissions for the Richmond-Petersburg area, by classification.

Table 2-1					
VOC Emissions, Tons per Typical Summer Weekday					
Year	Point	Area ¹	Nonroad	Mobile ²	Total
2002 Data	31.228	51.364	23.278	50.200	156.07
2005 Data	32.705	54.760	20.438	43.518	151.421
Difference 2002-2005	1.477	3.396	-2.840	-6.682	-4.649
2011 Data	36.074	60.315	15.898	32.343	144.630
Difference 2005-2011	3.369	5.555	-4.540	-11.175	-6.791
2018 Data	39.900	68.331	15.515	23.845	147.591
Difference 2005-2018	7.195	13.571	-4.923	-19.673	-3.830
NO _x Emissions, Tons per Typical Summer Weekday					
Year	Point	Area ¹	Nonroad	Mobile ²	Total
2002 Data	119.750	27.067	17.792	74.130	238.740
2005 Data	77.281	26.501	16.862	67.155	187.799
Difference 2002-2005	-42.469	-0.566	-0.930	-6.975	-50.940
2011 Data	84.296	27.417	13.118	43.661	168.492
Difference 2005-2011	7.015	0.916	-3.744	-23.494	-19.307
2018 Data	90.521	28.169	8.641	26.827	154.158
Difference 2005-2018	13.240	1.668	-8.221	-40.328	-33.641

¹Includes site/project specific emissions estimates and projections

²Includes transportation conformity safety margins

Table 2-1, Continued					
CO Emissions, Tons per Typical Summer Weekday					
Year	Point	Area ¹	Nonroad	Mobile ²	Total
2002 Data	22.555	38.245	268.606	638.216	967.620
2005 Data	23.385	39.548	285.780	509.681	858.394
Difference 2002-2005	0.830	1.303	17.174	-128.535	-109.228
2011 Data	25.588	39.320	308.715	355.364	728.987
Difference 2005-2011	2.203	-0.228	22.935	-154.317	-129.407
2018 Data	27.667	43.151	337.174	321.035	729.027
Difference 2005-2018	4.282	3.603	51.394	-188.646	-129.367

¹Includes site/project specific emissions estimates and projections

²Includes transportation conformity safety margins

3. Point Source Emissions

The purpose of this section is to document the development of the actual and projected stationary point source emission inventories for the Richmond-Petersburg non-attainment area to support the request for redesignation to attainment and the ozone standard maintenance plan. The emission inventories developed for these purposes include actual inventories for the calendar year 2002 and projected inventories for the calendar years 2005, 2011, and 2018. Particularly, for large utilities, available actual NO_x emissions for the year 2005 based on the continuous emission monitors (CEM) have been used. This information was downloaded from the Clean Air Markets Division (CAMD) website. The point source inventories presented here cover all stationary sources with pollutant emissions of ten tons per year or greater. As is the case with all inventories developed for ozone state implementation plan (SIP) planning purposes, these inventories are presented as average summer weekday emissions.

In general, the process of estimating stationary point source emissions is as follows. All these sources are permitted and/or registered with Virginia DEQ and are subsequently recorded and maintained electronically in the Department's Comprehensive Environmental Data System (CEDS). The emissions for these sources are updated annually by collecting year-specific emissions and/or activity level information. In this way, annual emissions inventories are developed and maintained by the Department for air quality purposes. In addition, major sources of ozone precursor pollutant emissions located in non-attainment areas are required to submit yearly emission statements containing detailed information on annual and typical summer weekday emissions.

The programs mentioned above are the main sources of the emission information used in this redesignation/maintenance package. Data collected from the sources involved is entered into the agency data system as annual air pollutant emissions estimates. These estimates are based on a number of acceptable estimation methods including continuous emissions monitors, source specific testing, emissions factors, and other methods. The annual estimates are converted into typical summer weekday emissions using standard internal calculation routines in the CEDS system. These internal calculations account for weekly/seasonal variation in source operations as well as other pertinent factors such as rule effectiveness (RE).

When developing these point source inventories, a cutoff emissions level of 10 tons/year of ozone precursor pollutants was used to determine whether a source was included in these inventories. Smaller emissions sources are assumed to be included in the area source emissions inventories.

The remainder of this section discusses the individual calendar year inventories and the methods used in their development.

3.1. 2002 Point Source Inventory

A design year emissions inventory, representing non-attainment conditions and a “worst case” emissions scenario contributing to ozone violations in the Richmond-Petersburg area, is required as the starting point for the re-designation request. In this case, the design year selected is 2002, which is the middle year of the three year period of 2001 to 2003 used to determine the non-attainment status of the area for designation purposes under the 8-hour ozone standard. This year also represents the most active ozone year of this period in terms of ozone exceedances.

To develop this inventory, actual annual and summer weekday point source emissions for 2002 were obtained from the CEDS data base. This inventory year has undergone substantial analysis and quality assurance review because of its status as the base year for air quality planning purposes for ozone, fine particulate matter, and regional haze. This inventory is also consistent with the 2002 data submitted to the National Emissions Inventory (NEI) for base and periodic emissions inventory (PEI) year purposes. The resulting annual and summer weekday point source emissions inventory is presented in Table 3.1-1.

TABLE 3.1-1 2002 RICHMOND-PETERSBURG NON-ATTAINMENT AREA POINT SOURCE INVENTORY FOR VOC, NOX AND CO						
Jurisdiction	State-County-Plant ID Reg #	Facility Name	SIC	VOC	NOX	CO
				tons/day		
Charles City	'51-036-00014 51254	Charles City County Landfill	4953	0.0444	0.0723	0.1372
Chesterfield	'51-041-00001 50397	E I du Pont de Nemours and Co-Spruance Plt	2821	1.1915	0.0129	0.0069
		Dominion - Chesterfield Power Station	4911	0.3106	48.5895	2.5746
	'51-043-00003 50249	Kaiser Bellwood Corporation	3354	0.4372	0.2032	0.0052
		Brown & Williamson Tobacco Corporation Chester	2141	0.1705	0.0857	0.1284
	'51-045-00012 50099	AlSCO Metals Corporation	3341	0.0598	0.0663	0.0224
		Defense Supply Center Richmond	9711	0.0699	0.7652	1.1530
	'51-046-00015 50127	Honeywell Nylon Incorporated	2824	0.1708	0.2703	0.1145
		Wabash Aluminum Alloys LLC	3341	0.0051	0.0095	0.0023
	'51-049-00058 50260	Reynolds Metals Company Bellwood Printing Plant	2754	1.5331	0.0128	0.0026
		VSU	8221	0.0436	0.0638	0.0413
	'51-051-00073 50418	DuPont Teijin Films	2821	0.3256	0.0869	0.0730
		DuPont De Nemours E I & Company Inc James River Pl	2819	0.0000	0.0068	0.0005
	'51-052-00078 50554	Philip Morris USA Inc - Park 500	2141	1.0341	5.9325	0.1993
		Univar USA Incorporated - Chester	5169	0.1073	0.0010	0.0003

TABLE 3.1-1 2002 RICHMOND-PETERSBURG NON-ATTAINMENT AREA POINT SOURCE INVENTORY FOR VOC, NOX AND CO

Jurisdiction	State-County-Plant ID Reg #	Facility Name	SIC	VOC	NOX	CO
				tons/day		
	'51-055-00090 50752	Shoosmith Brothers Inc	4953	0.0253	0.0666	0.3836
	'51-056-00110 50906	Super Radiator Coils	3585	0.0019	0.0002	0.0002
	'51-057-00114 50831	Honeywell International Inc-Technical Center	2824	0.1196	0.0233	0.0049
	'51-058-00122 50984	Maruchan Virginia Inc	2099	0.0027	0.0484	0.0407
	'51-059-00133 50766	The Hon Company	2522	0.4827	0.0204	0.0041
	'51-060-00181 51289	APAC - Virginia, Inc. (Chesterfield Plant)	2951	0.0216	0.0327	0.0070
	'51-061-00184 51294	Rehrig International Inc	3496	0.0361	0.0069	0.0058
				Total	6.1491	56.3051
					4.7704	
Hanover	'51-085-00001 50105	Flippo Lumber Corp	2421	0.1740	0.1058	0.1058
	'51-085-00004 50055	Tyson Foods Inc	2015	0.0327	0.4683	0.0801
	'51-085-00010 50217	US Silica Company Montpelier Operation	1459	0.0003	0.0238	0.0018
	'51-085-00042 50840	Bear Island Paper Company LLC	2621	1.5327	0.7261	1.7568
	'51-085-00061 51018	Doswell Limited Partnership	4911	0.1462	2.6265	1.2261
	'51-085-00063 51046	REA Algonquin Hanover Manufacturing Plant	3354	0.0032		
	'51-085-00069 51064	Richmond Newspapers Incorporated - Hanover	2711	0.0851	1.3810	0.1743
	'51-085-00084 51293	Interflex Group Inc - Virginia Plant	2759	0.0727	0.0037	0.0031
	'51-085-51048 51048	Purgo Inc	4953	0.0161	0.0335	0.0047
					Total	2.0630
						5.3686
						3.3527
Henrico	'51-087-00004 50040	Branscome Inc - Richmond Asphalt	2951	0.0017	0.0325	0.0987
	'51-087-00027 50358	CadmusMack Byrd Press Division	2752	0.1320	0.0148	0.0036
	'51-087-00030 50375	Stone Container Corporation Lewis Rd	2653	0.0125	0.0459	0.0160
	'51-087-00083 50703	Kraft Foods Global-Richmond Bakery	2052	0.0682	0.1842	0.0647
	'51-087-00100 50773	St Josephs Home	8051	0.0017	0.0320	0.0077
	'51-087-00130 50880	Quebecor Printing Richmond Incorporated	2754	2.0341	0.0397	0.0334
	'51-087-00144 50949	Graphic Packaging International, Inc.	2754	0.2630	0.0068	0.0057
	'51-087-00156 50997	Dominion - Darbytown	4911	0.0021	0.1399	0.0045
	'51-087-00161 51036	Johns Manville Corporation	2672	0.0417	0.0032	0.0026

TABLE 3.1-1 2002 RICHMOND-PETERSBURG NON-ATTAINMENT AREA POINT SOURCE INVENTORY FOR VOC, NOX AND CO							
Jurisdiction	State-County-Plant ID Reg #	Facility Name	SIC	VOC	NOX	CO	
				tons/day			
	'51-087-00164 51057	Print South Corporation	2761	0.0306			
	'51-087-00168 51069	BFI Waste Systems/Gas Recovery Systems	4911	0.0115	0.0419	0.1020	
	'51-087-00179 51103	Vanguard Plastics Inc	2673	0.0398			
	'51-087-00209 51227	BFI Old Dominion Landfill	4953	0.0041	0.0236	0.1291	
	'51-087-00210 51232	Infineon Technologies Richmond	3674	0.0391	0.0267	0.0179	
	'51-087-00217 51286	Henrico County DPU Springfield Road Landfill	4953	0.0139	0.0009	0.0174	
	'51-087-50039 50039	Blakemore Construction Corp Portugee Rd	2951	0.0086	0.0239	0.0070	
				Total	2.7044	0.6160	0.5102
Prince George	'51-149-00007 50564	US Army Fort Lee	9711	0.0057	0.0826	0.0176	
	'51-149-00062 51009	Columbia Gas Transmission Corp-Prince George	4922	0.0815	1.0954	0.9731	
				Total	0.0872	1.1780	0.9906
Colonial Heights	'51-570-00105 50833	Roslyn Converters Inc	2754	0.0837	0.0035	0.0007	
	'51-570-00178 51282	Sun Chemical Corporation GPI	2893	0.0806			
				Total	0.1643	0.0035	0.0007
Hopewell	'51-670-00003 50370	Stone Container Corporation Hopewell	2631	1.2167	4.7950	8.0413	
	'51-670-00006 50363	Hercules Inc Aqualon Div	2869	1.2320			
	'51-670-00026 50232	Honeywell Nylon Inc-Hopewell	2869	5.4232	24.4538	0.8822	
	'51-670-00053 50735	Hopewell WWTP	4952	0.1556	0.0514	0.0667	
	'51-670-00054 50891	Goldschmidt Chemical Corp	2819	0.0636	0.0047	0.0040	
	'51-670-00055 50950	James River Cogeneration Company	4911	0.0008	4.8740	0.4388	
	'51-670-00058 50967	Hopewell Cogeneration Ltd Partnership	4911	0.1339	10.2725	0.2574	
				Total	8.2257	44.4515	9.6904
Petersburg	'51-730-00001 50052	Southside Virginia Training Center	8063	0.0202	0.1428	0.0536	
	'51-730-00048 50292	Brenco Inc	3562	0.2016	0.0288	0.0242	
				Total	0.2218	0.1716	0.0778
Richmond	'51-760-00002 50534	Reynolds Metals Company Richmond Foil Plant	3353	5.8483	0.0544	0.0457	
	'51-760-00003 50531	Sampson Coatings Inc Hull St Office	2851	0.2361	0.0005	0.0001	
	'51-760-00004 50356	Sonoco Products Co	2675	0.0422	0.0589	0.0610	

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TABLE 3.1-1 2002 RICHMOND-PETERSBURG NON-ATTAINMENT AREA POINT SOURCE INVENTORY FOR VOC, NOX AND CO

Jurisdiction	State-County-Plant ID Reg #	Facility Name	SIC	VOC	NOX	CO
				tons/day		
	'51-760-00005 50031	Miller Manufacturing Company	2541	0.0867		
	'51-760-00009 50082	Philip Morris USA Inc Leaf Processing Facility	2111	0.0549	0.1053	0.0881
	'51-760-00012 50355	Richmond Paperboard	2675	0.0236	0.1813	0.0637
	'51-760-00013 50126	VCU East Plant	8062	0.0107	0.0535	0.0768
	'51-760-00037 50043	APAC-Virginia Inc Rchmd Plt #412	2951	0.0189	0.0219	0.0127
	'51-760-00038 50046	Interstate Construction Corp	2951	0.0202	0.0674	0.2245
	'51-760-00052 50080	Philip Morris USA Inc - Blended Leaf (BL) Plant	2141	0.5171	0.1645	0.3630
	'51-760-00056 50085	Packaging Corporation of America	2653	0.1937	0.0080	0.0087
	'51-760-00063 50110	TCS Materials - Deepwater Terminal Rd	3273	0.0000	0.0005	0.0001
	'51-760-00072 50143	Carter Printing	2732	0.0437	0.0004	0.0001
	'51-760-00075 50168	Transmontaigne Terminaling Inc Richmond Atlantic	4226	0.0762		
	'51-760-00084 50199	Interbake Foods Inc	2052	0.0991	0.0143	0.0120
	'51-760-00087 50209	University of Richmond	8221	0.0287	0.3569	0.1403
	'51-760-00093 50224	Fergusson, J W and Sons, Inc.	2754	0.1274	0.0051	0.0029
	'51-760-00097 50257	Aqua Clean Environmental of Virginia	3442	0.1178		
	'51-760-00098 50258	Kinder Morgan Southeast Terminals-Rchmd Terminals	4226	0.1881		
	'51-760-00108 50278	BP Products North America-Rchmd	5171	0.0638		
	'51-760-00122 50314	Altadis USA	2131	0.0404	0.0044	0.0029
	'51-760-00123 50334	Citgo Petroleum Corporation	5171	0.1413	0.0087	0.0218
	'51-760-00129 50344	Mead Westvaco Corporation Headquarters	2754	0.3426	0.0130	0.0057
	'51-760-00246 50528	Carpenter Company, Richmond Plant	3086	0.0283	0.0063	0.0051
	'51-760-00247 50533	Flint Hills Resources LP	5171	0.0452	0.0070	0.0022
	'51-760-00264 50591	US Courthouse	9211	0.0026	0.0469	0.0394
	'51-760-00308 50076	Philip Morris USA Manufacturing Center	2111	0.6861	0.9906	0.0368
	'51-760-00328 50769	Virginia Union University	8221	0.0200	0.3643	0.3060
	'51-760-00375 50923	Richmond Barrel & Box Co Inc	7699	0.0540	0.0020	0.0017

TABLE 3.1-1 2002 RICHMOND-PETERSBURG NON-ATTAINMENT AREA POINT SOURCE INVENTORY FOR VOC, NOX AND CO							
Jurisdiction	State-County-Plant ID Reg #	Facility Name	SIC	VOC	NOX	CO	
				tons/day			
	'51-760-00388 51012	Liphart Steel Company Inc	3441	0.0478			
	'51-760-00389 50988	Dominion - Bellemeade	4911	0.0370	0.4959	0.0740	
	'51-760-00399 51033	Cogentrix of Richmond	4911	0.0352	7.7320	1.2431	
	'51-760-00400 51034	Kinder Morgan Operating LP "A"-Deepwater Terminal	5171	2.1137	0.0177	0.0087	
	'51-760-00405 51055	Wythe Park Power Inc Richmond Plant	4931	0.0424	0.7556	0.1402	
	'51-760-00410 51075	Ethyl Corp	8734	0.1108	0.0449	0.0361	
	'51-760-00468 51894	Blue Ridge Paper Products DairyPak Paperboard	2657	0.0236	0.0013	0.0011	
				Total	11.5681	11.5834	3.0246

3.2. 2005, 2011, and 2018 Projected Point Source Emissions

3.2.1. 2005 Attainment Year Emissions Inventory

An attainment year emissions inventory that is representative of conditions when the attainment of the ozone standard was recorded is also required for plan purposes. This inventory serves two important purposes. First, it documents the improvement in air quality through permanent and enforceable reductions from the design (non-attainment) year. Secondly, when combined with the other major inventory categories (area, non-road, and mobile), it establishes the overall pollutant emissions caps for the area. Future predicted emissions for the area must remain below these caps throughout the 10 year maintenance plan period. The attainment year selected for this purpose is 2005 since it was the year that compliance with the ozone standard was recorded in the area.

Since an actual 2005 emissions inventory for point sources has not yet been completed, the following procedure was used to develop this emissions inventory. The actual 2002 emissions inventory was used as a starting point and then projected to 2005 using the latest versions of the EPA developed and approved Economic Growth Analysis System (EGAS 5.0). However, for the utilities actual NO_x emission values based on CEM data as available have been used. The EGAS 5.0 model produces facility or process (SCC) level emissions growth factors based on national and regional economic models. These models are in turn driven by leading economic indicators such as earnings, production, and employment. The latest version of EGAS, which is in BETA form, was selected for use since it contains more recent national and regional economic forecasts than previous versions of EGAS. It allows for the selection of a specific base year for inclusion in the process to project growth factors. This system employs the following three tiered process to develop growth factors:

- (#1) National Economic Tier - National final demand forecasts are developed using the Bureau of Labor Statistics (BLS) data by sector to drive the second step.
- (#2) Regional Economic Tier – An economic model (REMI) translates non-fuel related national economic activity into regional, state, and/or area specific economic activity estimates (such as output, value added, and employment) by sector. Fuel-related sectors rely on Census division combustion projections from DOE.
- (#3) Growth Factor Tier – Area specific activity projections are translated into emissions growth factors by

SIC or SCC codes.

Using the process described above, specific Source Classification Code (SCC) level growth factors for the years 2005, 2011, and 2018 were derived with 2002 as the base year and then applied to the 2002 emissions inventory. Growth factors were also developed with 2005 as the base year applicable to cases for which NO_x emissions are available for the year 2005. An example of the output from the EGAS model is provided in Table 3.2.1-1.

TABLE 3.2.1-1 EXAMPLE OUTPUT FROM THE EGAS5.0 GROWTH FACTOR MODEL				
SCC	FIPS	2005	2011	2018
10101302	51041	0.504527	0.446582	0.303531
20100102	51041	0.772472	0.804918	0.812774
30203399	51760	0.921686	0.967647	1.066558
20400401	51760	0.925970	1.114783	1.361614
30500201	51041	0.971316	1.030932	1.136313
10100204	51670	0.974379	1.063360	1.194668
39000689	51041	1.000000	1.000000	1.000000
20100802	51087	1.002402	1.003166	1.003603
40301021	51760	1.002925	1.086595	1.197665
40600141	51760	1.012943	1.044655	1.079226
31505003	51730	1.023491	1.117385	1.237341
40400110	51760	1.024238	1.083624	1.148367
30588801	51085	1.032025	1.141706	1.271844
10101201	51760	1.039119	1.121627	1.180645
30102401	51041	1.040368	1.136613	1.252797
40714698	51760	1.040397	1.138940	1.255361
40201301	51041	1.042517	1.142237	1.258995
30102099	51570	1.046182	1.151362	1.269053
40100198	51041	1.047717	1.152510	1.276237
30199999	51670	1.048370	1.150582	1.268193
30101401	51760	1.048667	1.147659	1.264971
30203202	51087	1.050209	1.149608	1.267119
50100410	51036	1.057888	1.189112	1.335786
50200601	51087	1.065449	1.183583	1.315103
30282599	51041	1.067249	1.174550	1.294611
40600251	51760	1.067300	1.197656	1.345384
30700122	51670	1.073068	1.181667	1.302455
30100309	51670	1.079145	1.204116	1.327200
40500401	51087	1.081935	1.197697	1.320124
38500110	51760	1.085156	1.262896	1.459599
31000107	51760	1.088609	1.246291	1.388351
30788801	51670	1.095209	1.272189	1.478172
30700101	51670	1.100612	1.277814	1.480769

TABLE 3.2.1-1 EXAMPLE OUTPUT FROM THE EGAS5.0 GROWTH FACTOR MODEL				
SCC	FIPS	2005	2011	2018
30500315	51087	1.101120	1.372438	1.676320
30800799	51760	1.113621	1.243226	1.370307
40202099	51041	1.117909	1.327111	1.620956
30499999	51085	1.119669	1.414299	1.727449
40202699	51041	1.130255	1.428963	1.745360
30400150	51041	1.137259	1.454893	1.777032
31303502	51760	1.144784	1.445831	1.765963
40100398	51760	1.144827	1.439028	1.757653
30400103	51041	1.150153	1.472135	1.798090
39999992	51041	1.158547	1.478971	1.806441
40202503	51041	1.244137	1.611324	1.968099
20100202	51760	1.288614	1.723748	1.798840

3.2.2. 2011 and 2018 Maintenance Year Emissions Inventories

Future projected maintenance year emissions inventories are also required for purposes of demonstrating continued attainment of the ozone standard. This is done by showing that future emissions in the area will remain at or below the established attainment year emissions caps during a period of more than ten years, known as the maintenance period. For the Richmond-Petersburg area re-designation/maintenance package, an interim projection year of 2011 and a final projection year of 2018 are selected. Selection of these specific years has a bearing on the impact of Phase I and Phase II Clean Air Interstate Rule (CAIR) in the area. Using the same procedure described above for the 2005 attainment year inventory, the EGAS tool was used to develop process level growth factors for the three future projection years. Table 3.2.1-1 also includes growth factors for future years. These factors were then applied to the 2002 inventory to produce the resulting projection year inventories. For utilities for which actual 2005 emissions are available, growth factors are derived for the years 2011 and 2018 in the same manner with 2005 as the base year. For these line items the growth factors are missing in NO_x Table 3.2.2-2 for the year 2005.

The overall result of using this methodology for projecting point source emissions inventories for the years of interest from the baseline 2002/2005 actual emissions inventory is provided in the following tables. In these tables segments that had no emissions during the year 2002 are excluded.

Table 3.2.2-1									
Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
Charles City Jurisdiction									
51-036-00014 51254	Charles City County Landfill	50100410	0.0004	1.0579	0.0005	1.1891	0.0005	1.3358	0.0006
		50100410	0.0013	1.0579	0.0014	1.1891	0.0015	1.3358	0.0017
		50280001	0.0426	1.0654	0.0454	1.1836	0.0505	1.3151	0.0561
	Total		0.0444		0.0473		0.0525		0.0584

Table 3.2.2-1									
Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
Chesterfield Jurisdiction									
51-041-00001 50397	E I du Pont de Nemours and Co-Spruance Plt	10300602	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		10300602	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		39990023	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		40200801	0.0003	1.0852	0.0003	1.2629	0.0004	1.4596	0.0004
		49099999	0.0008	1.0404	0.0009	1.1389	0.0009	1.2554	0.0010
		49099999	0.0011	1.0404	0.0011	1.1389	0.0013	1.2554	0.0014
		10200602	0.0013	1.0000	0.0013	1.0000	0.0013	1.0000	0.0013
		40100198	0.0049	1.0477	0.0052	1.1525	0.0057	1.2762	0.0063
		49099999	0.0063	1.0404	0.0066	1.1389	0.0072	1.2554	0.0079
		49099999	0.0080	1.0404	0.0083	1.1389	0.0091	1.2554	0.0100
		30102416	0.0082	1.0404	0.0086	1.1366	0.0094	1.2528	0.0103
		49099999	0.0085	1.0404	0.0089	1.1389	0.0097	1.2554	0.0107
		49099999	0.0085	1.0404	0.0089	1.1389	0.0097	1.2554	0.0107
		49099999	0.0091	1.0404	0.0094	1.1389	0.0103	1.2554	0.0114
		49099999	0.0113	1.0404	0.0117	1.1389	0.0128	1.2554	0.0141
		49099999	0.0118	1.0404	0.0123	1.1389	0.0135	1.2554	0.0148
		40200801	0.0115	1.0852	0.0125	1.2629	0.0146	1.4596	0.0168
		49099999	0.0124	1.0404	0.0129	1.1389	0.0141	1.2554	0.0155
		49099999	0.0951	1.0404	0.0989	1.1389	0.1083	1.2554	0.1193
		49099999	0.9922	1.0404	1.0323	1.1389	1.1301	1.2554	1.2456
Total			1.1915		1.2402		1.3584		1.4979
51-041-00002 50396	Dominion - Chesterfield Power Station	20100102	0.0000	0.7725	0.0000	0.8049	0.0000	0.8128	0.0000
		10101302	0.0000	0.5045	0.0000	0.4466	0.0000	0.3035	0.0000
		20100109	0.0000	0.7725	0.0000	0.8049	0.0000	0.8128	0.0000
		20200401	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000

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Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		10100501	0.0001	0.7725	0.0000	0.8049	0.0000	0.8128	0.0000
		10100501	0.0001	0.7725	0.0000	0.8049	0.0000	0.8128	0.0000
		10100501	0.0002	0.7725	0.0001	0.8049	0.0001	0.8128	0.0001
		10100501	0.0002	0.7725	0.0001	0.8049	0.0001	0.8128	0.0001
		20100201	0.0071	1.2886	0.0092	1.7237	0.0123	1.7988	0.0129
		10100212	0.0114	0.9744	0.0111	1.0634	0.0121	1.1947	0.0136
		10100212	0.0341	0.9744	0.0333	1.0634	0.0363	1.1947	0.0408
		10100212	0.0978	0.9744	0.0953	1.0634	0.1040	1.1947	0.1169
		10100212	0.1597	0.9744	0.1556	1.0634	0.1698	1.1947	0.1908
		Total	0.3106		0.3048		0.3349		0.3753
51-041-00003 50249	Kaiser Bellwood Corporation	10300501	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		39000689	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10300603	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		39000689	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		39000689	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		39000689	0.0015	1.0000	0.0015	1.0000	0.0015	1.0000	0.0015
		40100299	0.4354	1.1448	0.4984	1.4390	0.6265	1.7577	0.7653
		Total	0.4372		0.5003		0.6284		0.7671
51-041-00004 50008	Brown & Williamson Tobacco Corporation Chester	30203399	0.0007	0.9217	0.0007	0.9676	0.0007	1.0666	0.0008
		10200602	0.0008	1.0000	0.0008	1.0000	0.0008	1.0000	0.0008
		10200602	0.0016	1.0000	0.0016	1.0000	0.0016	1.0000	0.0016
		30203399	0.0022	0.9217	0.0020	0.9676	0.0021	1.0666	0.0024
		30203399	0.0033	0.9217	0.0030	0.9676	0.0032	1.0666	0.0035
		30282599	0.0038	1.0672	0.0041	1.1745	0.0045	1.2946	0.0049
		30282599	0.0039	1.0672	0.0041	1.1745	0.0045	1.2946	0.0050

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Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
51-041-00012 50099	AlSCO Metals Corporation	3020339 9	0.0061	0.9217	0.0056	0.9676	0.0059	1.0666	0.0065
		3020339 9	0.0077	0.9217	0.0071	0.9676	0.0075	1.0666	0.0082
		3020339 9	0.0100	0.9217	0.0092	0.9676	0.0097	1.0666	0.0107
		1020060 2	0.0122	1.0000	0.0122	1.0000	0.0122	1.0000	0.0122
		3020339 9	0.0155	0.9217	0.0143	0.9676	0.0150	1.0666	0.0165
		3020339 9	0.0166	0.9217	0.0153	0.9676	0.0161	1.0666	0.0177
		3020339 9	0.0200	0.9217	0.0185	0.9676	0.0194	1.0666	0.0214
		3020339 9	0.0255	0.9217	0.0235	0.9676	0.0246	1.0666	0.0272
		3020339 9	0.0406	0.9217	0.0374	0.9676	0.0393	1.0666	0.0433
		Total	0.1705		0.1594		0.1671		0.1826
51-041-00015 50127	Defense Supply Center Richmond	3900068 9	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		3900068 9	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		3900068 9	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		3900068 9	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		3900068 9	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
		3900068 9	0.0006	1.0000	0.0006	1.0000	0.0006	1.0000	0.0006
		3900068 9	0.0009	1.0000	0.0009	1.0000	0.0009	1.0000	0.0009
		3900068 9	0.0009	1.0000	0.0009	1.0000	0.0009	1.0000	0.0009
		3040015 0	0.0563	1.1373	0.0640	1.4549	0.0819	1.7770	0.1001
		Total	0.0598		0.0676		0.0854		0.1036

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Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		20200102	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		20200102	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		40100398	0.0001	1.1448	0.0002	1.4390	0.0002	1.7577	0.0002
		30622406	0.0002	1.0029	0.0002	1.0866	0.0002	1.1977	0.0002
		20200301	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200301	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
51-041-00015 50127	Defense Supply Center Richmond	20200301	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200301	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200301	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200301	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200401	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200401	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200301	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200301	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200301	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200301	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200401	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200401	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200401	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		20200401	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		20200301	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		20200301	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		40188805	0.0003	1.1448	0.0003	1.4390	0.0004	1.7577	0.0005
		20200102	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		20200401	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		20200301	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
		40202699	0.0005	1.1303	0.0006	1.4290	0.0008	1.7454	0.0009

Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
51-041-00015 50127	Defense Supply Center Richmond	2020030 1	0.0006	1.0000	0.0006	1.0000	0.0006	1.0000	0.0006
		4020260 1	0.0008	1.1303	0.0009	1.4290	0.0011	1.7454	0.0013
		4020260 1	0.0022	1.1303	0.0025	1.4290	0.0031	1.7454	0.0038
		4018880 5	0.0025	1.1448	0.0028	1.4390	0.0036	1.7577	0.0043
		4020260 1	0.0027	1.1303	0.0031	1.4290	0.0039	1.7454	0.0047
		2020040 1	0.0052	1.0000	0.0052	1.0000	0.0052	1.0000	0.0052
		2020040 1	0.0052	1.0000	0.0052	1.0000	0.0052	1.0000	0.0052
		2020040 1	0.0052	1.0000	0.0052	1.0000	0.0052	1.0000	0.0052
		2020040 1	0.0052	1.0000	0.0052	1.0000	0.0052	1.0000	0.0052
		2020030 1	0.0071	1.0000	0.0071	1.0000	0.0071	1.0000	0.0071
		2020030 1	0.0071	1.0000	0.0071	1.0000	0.0071	1.0000	0.0071
		4020260 1	0.0064	1.1303	0.0073	1.4290	0.0092	1.7454	0.0112
		3062220 1	0.0131	1.0029	0.0132	1.0866	0.0143	1.1977	0.0157
Total			0.0699		0.0720		0.0778		0.0842
51-041-00051 50233	Honeywell Nylon Incorporated	3010240 1	0.0000	1.0404	0.0000	1.1366	0.0000	1.2528	0.0000
		3999999 2	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000
		1020050 2	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3999999 2	0.0001	1.1585	0.0001	1.4790	0.0001	1.8064	0.0001
		3999999 2	0.0001	1.1585	0.0001	1.4790	0.0001	1.8064	0.0001
		3999999 2	0.0001	1.1585	0.0001	1.4790	0.0001	1.8064	0.0001
51-041-00051 50233	Honeywell Nylon Incorporated	3010240 1	0.0001	1.0404	0.0001	1.1366	0.0001	1.2528	0.0001
		1020050 2	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		1020050 1	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		1020060 2	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		3010182 7	0.0002	1.0404	0.0002	1.1366	0.0002	1.2528	0.0002
		3999999 2	0.0002	1.1585	0.0002	1.4790	0.0002	1.8064	0.0003

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Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		3010240 1	0.0002	1.0404	0.0002	1.1366	0.0002	1.2528	0.0002
		1020050 2	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		1020050 2	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		1020050 2	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		3010240 1	0.0003	1.0404	0.0003	1.1366	0.0003	1.2528	0.0003
		1020060 2	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		3010240 1	0.0005	1.0404	0.0005	1.1366	0.0006	1.2528	0.0006
		3012108 0	0.0005	1.0404	0.0005	1.1389	0.0006	1.2554	0.0006
		3010240 1	0.0005	1.0404	0.0005	1.1366	0.0006	1.2528	0.0006
		3012108 0	0.0005	1.0404	0.0006	1.1389	0.0006	1.2554	0.0007
		3012108 0	0.0006	1.0404	0.0006	1.1389	0.0007	1.2554	0.0007
		3999999 2	0.0005	1.1585	0.0006	1.4790	0.0008	1.8064	0.0010
		1020060 2	0.0008	1.0000	0.0008	1.0000	0.0008	1.0000	0.0008
		3010240 1	0.0008	1.0404	0.0008	1.1366	0.0009	1.2528	0.0010
		3012108 0	0.0010	1.0404	0.0010	1.1389	0.0011	1.2554	0.0012
		3010240 1	0.0010	1.0404	0.0010	1.1366	0.0011	1.2528	0.0012
		3010240 1	0.0012	1.0404	0.0013	1.1366	0.0014	1.2528	0.0015
		3010240 1	0.0012	1.0404	0.0013	1.1366	0.0014	1.2528	0.0015
		3010240 1	0.0013	1.0404	0.0013	1.1366	0.0014	1.2528	0.0016
		3010240 1	0.0013	1.0404	0.0013	1.1366	0.0014	1.2528	0.0016
		3010240 1	0.0013	1.0404	0.0013	1.1366	0.0015	1.2528	0.0016
		3010240 1	0.0013	1.0404	0.0014	1.1366	0.0015	1.2528	0.0016
		1020060 2	0.0014	1.0000	0.0014	1.0000	0.0014	1.0000	0.0014
		3010240 1	0.0013	1.0404	0.0014	1.1366	0.0015	1.2528	0.0017
		3010240 1	0.0013	1.0404	0.0014	1.1366	0.0015	1.2528	0.0017

Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
51-041-00051 50233	Honeywell Nylon Incorporated	3010182 7	0.0014	1.0404	0.0014	1.1366	0.0015	1.2528	0.0017
		3010240 1	0.0014	1.0404	0.0015	1.1366	0.0016	1.2528	0.0018
		3010240 1	0.0015	1.0404	0.0015	1.1366	0.0017	1.2528	0.0018
		3010240 1	0.0015	1.0404	0.0015	1.1366	0.0017	1.2528	0.0018
		3010240 1	0.0015	1.0404	0.0015	1.1366	0.0017	1.2528	0.0018
		1020060 2	0.0017	1.0000	0.0017	1.0000	0.0017	1.0000	0.0017
		3010240 1	0.0017	1.0404	0.0017	1.1366	0.0019	1.2528	0.0021
		3999999 2	0.0015	1.1585	0.0018	1.4790	0.0022	1.8064	0.0027
		1020060 2	0.0018	1.0000	0.0018	1.0000	0.0018	1.0000	0.0018
		3010182 7	0.0023	1.0404	0.0024	1.1366	0.0026	1.2528	0.0029
		3010018 0	0.0025	1.0404	0.0026	1.1389	0.0028	1.2554	0.0031
		3010018 0	0.0025	1.0404	0.0026	1.1389	0.0028	1.2554	0.0031
		3010240 1	0.0033	1.0404	0.0034	1.1366	0.0037	1.2528	0.0041
		3010240 1	0.0035	1.0404	0.0036	1.1366	0.0040	1.2528	0.0044
		3010240 1	0.0035	1.0404	0.0037	1.1366	0.0040	1.2528	0.0044
		3010240 1	0.0036	1.0404	0.0038	1.1366	0.0041	1.2528	0.0045
		3999999 2	0.0035	1.1585	0.0040	1.4790	0.0052	1.8064	0.0063
		1020060 2	0.0045	1.0000	0.0045	1.0000	0.0045	1.0000	0.0045
		3012108 0	0.0043	1.0404	0.0045	1.1389	0.0049	1.2554	0.0054
		3010182 7	0.0060	1.0404	0.0062	1.1366	0.0068	1.2528	0.0075
		3010240 1	0.0075	1.0404	0.0078	1.1366	0.0085	1.2528	0.0094
		3010240 1	0.0131	1.0404	0.0137	1.1366	0.0149	1.2528	0.0165
		3012108 0	0.0165	1.0404	0.0171	1.1389	0.0188	1.2554	0.0207
		3012108 0	0.0180	1.0404	0.0188	1.1389	0.0205	1.2554	0.0226
		3010240 1	0.0189	1.0404	0.0197	1.1366	0.0215	1.2528	0.0237

Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		3010182 7	0.0224	1.0404	0.0233	1.1366	0.0255	1.2528	0.0281
	Total		0.1708		0.1779		0.1946		0.2144
51-041-00057 50252	Wabash Aluminum Alloys LLC	3900058 9	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3900058 9	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3900068 9	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3900068 9	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3900068 9	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3900068 9	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		3040010 3	0.0001	1.1502	0.0001	1.4721	0.0002	1.7981	0.0002
		3040010 3	0.0004	1.1502	0.0004	1.4721	0.0006	1.7981	0.0007
		3040010 3	0.0011	1.1502	0.0013	1.4721	0.0016	1.7981	0.0020
		3040010 3	0.0033	1.1502	0.0038	1.4721	0.0048	1.7981	0.0059
	Total		0.0051		0.0058		0.0074		0.0089
51-041-00058 50260	Reynolds Metals Company Bellwood Printing Plant	3900068 9	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3900068 9	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3900068 9	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3900068 9	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		4909999 9	0.0008	1.0404	0.0008	1.1389	0.0009	1.2554	0.0010
		4909999 9	0.0012	1.0404	0.0013	1.1389	0.0014	1.2554	0.0015
		4909999 9	0.0016	1.0404	0.0017	1.1389	0.0018	1.2554	0.0020
		4909999 9	0.0016	1.0404	0.0017	1.1389	0.0018	1.2554	0.0020
		4020250 3	0.0045	1.2441	0.0056	1.6113	0.0073	1.9681	0.0089
		4909999 9	0.0064	1.0404	0.0067	1.1389	0.0073	1.2554	0.0080
51-041-00058 50260	Reynolds Metals Company Bellwood Printing Plant	4909999 9	0.0112	1.0404	0.0117	1.1389	0.0128	1.2554	0.0141
		4909999 9	0.0153	1.0404	0.0160	1.1389	0.0175	1.2554	0.0192
		4909999 9	0.0160	1.0404	0.0166	1.1389	0.0182	1.2554	0.0201
		4909999 9	0.0280	1.0404	0.0291	1.1389	0.0319	1.2554	0.0352

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Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		49099999	0.0463	1.0404	0.0482	1.1389	0.0528	1.2554	0.0582
		49099999	0.0717	1.0404	0.0746	1.1389	0.0816	1.2554	0.0900
		40201301	0.0748	1.0425	0.0780	1.1422	0.0854	1.2590	0.0942
		49099999	0.2032	1.0404	0.2114	1.1389	0.2314	1.2554	0.2551
		49099999	1.0500	1.0404	1.0924	1.1389	1.1959	1.2554	1.3181
		Total	1.5331		1.5961		1.7484		1.9279
		39090006	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
	VSU	10300401	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		39090005	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		10300602	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		10200602	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		39090006	0.0022	1.0000	0.0022	1.0000	0.0022	1.0000	0.0022
		10300208	0.0407	1.0000	0.0407	1.0000	0.0407	1.0000	0.0407
		Total	0.0436		0.0436		0.0436		0.0436
	DuPont Teijin Films	30101837	0.0000	1.0404	0.0000	1.1366	0.0000	1.2528	0.0001
		10200602	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		10200602	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		40301099	0.0008	1.0029	0.0008	1.0866	0.0009	1.1977	0.0009
		10200602	0.0013	1.0000	0.0013	1.0000	0.0013	1.0000	0.0013
		10200602	0.0013	1.0000	0.0013	1.0000	0.0013	1.0000	0.0013
		10200602	0.0014	1.0000	0.0014	1.0000	0.0014	1.0000	0.0014
		40301099	0.0055	1.0029	0.0055	1.0866	0.0060	1.1977	0.0066
		30800799	0.0056	1.1136	0.0062	1.2432	0.0069	1.3703	0.0076
		30101837	0.0064	1.0404	0.0067	1.1366	0.0073	1.2528	0.0081
		30125001	0.0086	1.0404	0.0089	1.1389	0.0098	1.2554	0.0108
		30800799	0.0084	1.1136	0.0094	1.2432	0.0105	1.3703	0.0115

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Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018		
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	
		3080079 9	0.0089	1.1136	0.0099	1.2432	0.0110	1.3703	0.0122	
		3080079 9	0.0095	1.1136	0.0106	1.2432	0.0118	1.3703	0.0130	
		3080079 9	0.0100	1.1136	0.0112	1.2432	0.0125	1.3703	0.0137	
		3080079 9	0.0102	1.1136	0.0114	1.2432	0.0127	1.3703	0.0140	
		3080079 9	0.0133	1.1136	0.0149	1.2432	0.0166	1.3703	0.0183	
		3080079 9	0.0137	1.1136	0.0153	1.2432	0.0171	1.3703	0.0188	
		3010183 7	0.0168	1.0404	0.0175	1.1366	0.0191	1.2528	0.0211	
		3018000 1	0.0176	1.0404	0.0183	1.1389	0.0200	1.2554	0.0221	
		4020220 1	0.0165	1.1136	0.0184	1.2432	0.0205	1.3703	0.0226	
		3018000 1	0.0394	1.0404	0.0410	1.1389	0.0449	1.2554	0.0495	
		4909999 9	0.1295	1.0404	0.1347	1.1389	0.1475	1.2554	0.1625	
		Total		0.3256		0.3453		0.3798		0.4181
51-041-00078 50554	DuPontJames River PI	1020050 1	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000	
		Total		0.0000		0.0000		0.0000		0.0000
51-041-00081 50722	Philip Morris USA Inc - Park 500	1020050 1	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000	
		1020050 1	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000	
		3999999 6	0.0007	1.1585	0.0008	1.4790	0.0010	1.8064	0.0012	
		3999999 6	0.0007	1.1585	0.0008	1.4790	0.0010	1.8064	0.0013	
		3999999 6	0.0007	1.1585	0.0008	1.4790	0.0010	1.8064	0.0013	
		3999999 6	0.0008	1.1585	0.0009	1.4790	0.0012	1.8064	0.0015	
		3999999 6	0.0008	1.1585	0.0010	1.4790	0.0012	1.8064	0.0015	
		3999999 6	0.0008	1.1585	0.0010	1.4790	0.0012	1.8064	0.0015	
		1020050 1	0.0010	1.0000	0.0010	1.0000	0.0010	1.0000	0.0010	
		3020339 9	0.0012	0.9217	0.0011	0.9676	0.0011	1.0666	0.0013	
		3999999 6	0.0011	1.1585	0.0013	1.4790	0.0016	1.8064	0.0020	
		3999999 6	0.0011	1.1585	0.0013	1.4790	0.0017	1.8064	0.0020	

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Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		3999999 6	0.0016	1.1585	0.0018	1.4790	0.0023	1.8064	0.0028
		3999999 6	0.0018	1.1585	0.0020	1.4790	0.0026	1.8064	0.0032
		3020339 9	0.0024	0.9217	0.0022	0.9676	0.0023	1.0666	0.0026
		3020339 9	0.0026	0.9217	0.0024	0.9676	0.0025	1.0666	0.0027
		3020339 9	0.0026	0.9217	0.0024	0.9676	0.0025	1.0666	0.0028
		3020339 9	0.0041	0.9217	0.0037	0.9676	0.0039	1.0666	0.0043
		3020339 9	0.0044	0.9217	0.0040	0.9676	0.0042	1.0666	0.0046
		1020020 2	0.0053	1.0000	0.0053	1.0000	0.0053	1.0000	0.0053
		3020339 9	0.0088	0.9217	0.0081	0.9676	0.0085	1.0666	0.0094
		3020339 9	0.0092	0.9217	0.0085	0.9676	0.0089	1.0666	0.0098
		3020339 9	0.0156	0.9217	0.0144	0.9676	0.0151	1.0666	0.0166
		1020020 2	0.0155	1.0000	0.0155	1.0000	0.0155	1.0000	0.0155
		3020339 9	0.0170	0.9217	0.0157	0.9676	0.0165	1.0666	0.0181
		3020339 9	0.0171	0.9217	0.0158	0.9676	0.0166	1.0666	0.0183
		3020339 9	0.0181	0.9217	0.0167	0.9676	0.0176	1.0666	0.0194
		3020339 9	0.0184	0.9217	0.0169	0.9676	0.0178	1.0666	0.0196
		3020339 9	0.0219	0.9217	0.0202	0.9676	0.0212	1.0666	0.0234
		3020339 9	0.1441	0.9217	0.1328	0.9676	0.1395	1.0666	0.1537
		3020339 9	0.2054	0.9217	0.1893	0.9676	0.1988	1.0666	0.2191
		3020339 9	0.2139	0.9217	0.1972	0.9676	0.2070	1.0666	0.2282
		3020339 9	0.2954	0.9217	0.2723	0.9676	0.2858	1.0666	0.3150
	Total		1.0341		0.9572		1.0065		1.1089
51-041-00084 50426	Univar USA Incorporated - Chester	1030060 3	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		1030050 3	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3011270 1	0.0036	1.0404	0.0037	1.1389	0.0041	1.2554	0.0045
		3011270 1	0.0043	1.0404	0.0044	1.1389	0.0048	1.2554	0.0053

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Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		3011270 1	0.0995	1.0404	0.1035	1.1389	0.1133	1.2554	0.1248
	Total		0.1073		0.1117		0.1222		0.1347
51-041-00090 50752	Shoosmith Brothers Inc	3050020 1	0.0000	0.9713	0.0000	1.0309	0.0000	1.1363	0.0000
		3050020 1	0.0022	0.9713	0.0021	1.0309	0.0022	1.1363	0.0025
		5028000 1	0.0231	1.0654	0.0246	1.1836	0.0273	1.3151	0.0303
		Total		0.0253		0.0267		0.0296	
51-041-00110 50906	Super Radiator Coils	1020060 3	0.0019	1.0000	0.0019	1.0000	0.0019	1.0000	0.0019
	Total		0.0019		0.0019		0.0019		0.0019
51-041-00114 50831	Honeywell International Inc- Technical Center	4030100 1	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977	0.0001
		4030100 7	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977	0.0001
		3010249 9	0.0011	1.0404	0.0011	1.1366	0.0012	1.2528	0.0014
		3010249 9	0.0025	1.0404	0.0026	1.1366	0.0029	1.2528	0.0032
		4010030 3	0.0025	1.1448	0.0028	1.4390	0.0036	1.7577	0.0043
		3010249 9	0.0057	1.0404	0.0060	1.1366	0.0065	1.2528	0.0072
		3010249 9	0.0082	1.0404	0.0085	1.1366	0.0093	1.2528	0.0103
		4909999 9	0.0272	1.0404	0.0283	1.1389	0.0310	1.2554	0.0341
		3010249 9	0.0722	1.0404	0.0751	1.1366	0.0820	1.2528	0.0904
		Total		0.1196		0.1247		0.1367	
51-041-00122 50984	Maruchan Virginia Inc	1020060 3	0.0012	1.0000	0.0012	1.0000	0.0012	1.0000	0.0012
		1020060 3	0.0015	1.0000	0.0015	1.0000	0.0015	1.0000	0.0015
		Total		0.0027		0.0027		0.0027	
51-041-00133 50766	The Hon Company	3900068 9	0.0011	1.0000	0.0011	1.0000	0.0011	1.0000	0.0011
		4020209 9	0.0370	1.1179	0.0413	1.3271	0.0491	1.6210	0.0599
		4020209 9	0.0600	1.1179	0.0671	1.3271	0.0796	1.6210	0.0973
		4010039 9	0.0619	1.1448	0.0708	1.4390	0.0890	1.7577	0.1088
		4020209 9	0.1252	1.1179	0.1399	1.3271	0.1661	1.6210	0.2029
		4020209 9	0.1976	1.1179	0.2208	1.3271	0.2622	1.6210	0.3202

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Table 3.2.2-1									
Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
	Total		0.4827		0.5411		0.6471		0.7902
51-041-00181 51289	APAC - Virginia, Inc. (Chesterfield Plant)	1030050 1	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		3050020 1	0.0213	0.9713	0.0207	1.0309	0.0220	1.1363	0.0242
	Total		0.0216		0.0210		0.0223		0.0245
51-041-00184 51294	Rehrig International Inc	1030060 3	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		1030060 2	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		4020011 0	0.0179	1.0852	0.0194	1.2629	0.0226	1.4596	0.0261
		4020011 0	0.0179	1.0852	0.0194	1.2629	0.0226	1.4596	0.0261
	Total		0.0361		0.0392		0.0455		0.0525
Hanover Jurisdiction									
51-085-00001 50105	Flippo Lumber Corp	1020090 6	0.0397	1.0000	0.0397	1.0000	0.0397	1.0000	0.0397
		3078889 8	0.1343	1.0952	0.1471	1.2722	0.1709	1.4782	0.1986
	Total		0.1740		0.1868		0.2106		0.2382
51-085-00004 50055	Tyson Foods Inc	1020060 2	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		1020060 2	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		1020060 2	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		1020060 2	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		2010010 2	0.0070	0.7725	0.0054	0.8049	0.0056	0.8128	0.0057
		2010010 2	0.0073	0.7725	0.0057	0.8049	0.0059	0.8128	0.0060
		2010010 2	0.0076	0.7725	0.0058	0.8049	0.0061	0.8128	0.0061
		2010010 2	0.0097	0.7725	0.0075	0.8049	0.0078	0.8128	0.0079
	Total		0.0327		0.0255		0.0265		0.0268
51-085-00010 50217	US Silica Company Montpelier Operation	1030050 4	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		1030050 4	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
	Total		0.0003		0.0003		0.0003		0.0003
51-085-00042 50840	Bear Island Paper Company LLC	1020060 1	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		1020060 1	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		1020020 2	0.0017	1.0000	0.0017	1.0000	0.0017	1.0000	0.0017

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Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		3999999 9	0.0134	1.1585	0.0156	1.4790	0.0199	1.8064	0.0243
		4079990 5	0.0184	1.0404	0.0191	1.1389	0.0209	1.2554	0.0230
		3070030 1	0.0202	1.0731	0.0217	1.1817	0.0239	1.3025	0.0263
		3070040 1	0.0271	1.0731	0.0291	1.1817	0.0320	1.3025	0.0353
		1020090 1	0.0461	1.0000	0.0461	1.0000	0.0461	1.0000	0.0461
		3070030 1	1.4054	1.0731	1.5081	1.1817	1.6607	1.3025	1.8305
		Total		1.5327		1.6417		1.8056	
51-085-00061 51018	Doswell Limited Partnership	2010010 1	0.0000	0.7725	0.0000	0.8049	0.0000	0.8128	0.0000
		2010010 1	0.0000	0.7725	0.0000	0.8049	0.0000	0.8128	0.0000
		2010010 1	0.0000	0.7725	0.0000	0.8049	0.0000	0.8128	0.0000
		2010010 1	0.0001	0.7725	0.0000	0.8049	0.0000	0.8128	0.0000
		2030010 1	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		2030010 1	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		1020060 2	0.0008	1.0000	0.0008	1.0000	0.0008	1.0000	0.0008
		1010060 1	0.0046	1.2886	0.0059	1.7237	0.0079	1.7988	0.0083
		1010060 1	0.0048	1.2886	0.0062	1.7237	0.0083	1.7988	0.0087
		1010060 1	0.0053	1.2886	0.0069	1.7237	0.0092	1.7988	0.0096
		1010060 1	0.0055	1.2886	0.0071	1.7237	0.0095	1.7988	0.0099
		2010020 1	0.0216	1.2886	0.0278	1.7237	0.0372	1.7988	0.0389
		2010020 1	0.0228	1.2886	0.0293	1.7237	0.0392	1.7988	0.0409
		2010020 1	0.0243	1.2886	0.0313	1.7237	0.0419	1.7988	0.0437
		2010020 1	0.0249	1.2886	0.0321	1.7237	0.0430	1.7988	0.0449
		2010020 1	0.0311	1.2886	0.0401	1.7237	0.0536	1.7988	0.0560
		Total		0.1462		0.1880		0.2511	
51-085-00063 51046	REA Algonquin Hanover Manufacturing Plant	3049999 9	0.0011	1.1197	0.0012	1.4143	0.0015	1.7274	0.0019
		3049999 9	0.0011	1.1197	0.0012	1.4143	0.0015	1.7274	0.0019

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Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		3049999 9	0.0011	1.1197	0.0012	1.4143	0.0015	1.7274	0.0019
	Total		0.0032		0.0036		0.0046		0.0056
51-085-00069 51064	Richmond Newspapers Incorporated - Hanover	4050041 4	0.0049	1.0819	0.0053	1.1977	0.0059	1.3201	0.0064
		4050041 6	0.0277	1.0819	0.0300	1.1977	0.0332	1.3201	0.0366
		2020010 4	0.0525	1.0000	0.0525	1.0000	0.0525	1.0000	0.0525
		Total	0.0851		0.0878		0.0916		0.0956
51-085-00084 51293	Interflex Group Inc - Virginia Plant	1030060 3	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		4050031 1	0.0003	1.0819	0.0003	1.1977	0.0003	1.3201	0.0003
		4071469 8	0.0005	1.0404	0.0005	1.1389	0.0006	1.2554	0.0006
		4050031 1	0.0009	1.0819	0.0010	1.1977	0.0011	1.3201	0.0012
		4050031 1	0.0019	1.0819	0.0021	1.1977	0.0023	1.3201	0.0025
		4050059 9	0.0022	1.0819	0.0024	1.1977	0.0027	1.3201	0.0029
		4050031 1	0.0025	1.0819	0.0027	1.1977	0.0030	1.3201	0.0033
		4050031 1	0.0030	1.0819	0.0032	1.1977	0.0036	1.3201	0.0039
		4050031 1	0.0032	1.0819	0.0034	1.1977	0.0038	1.3201	0.0042
		4050059 9	0.0054	1.0819	0.0058	1.1977	0.0064	1.3201	0.0071
		4050031 1	0.0059	1.0819	0.0064	1.1977	0.0071	1.3201	0.0078
		4050059 9	0.0073	1.0819	0.0079	1.1977	0.0087	1.3201	0.0096
		4050059 9	0.0085	1.0819	0.0092	1.1977	0.0102	1.3201	0.0112
		4050059 9	0.0090	1.0819	0.0097	1.1977	0.0108	1.3201	0.0119
		4050059 9	0.0094	1.0819	0.0102	1.1977	0.0113	1.3201	0.0124
		4050059 9	0.0125	1.0819	0.0135	1.1977	0.0150	1.3201	0.0165
		Total	0.0727		0.0786		0.0869		0.0958
51-085-51048 51048	Purgo Inc	3900049 9	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		3900059 9	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		3058880 1	0.0159	1.0320	0.0164	1.1417	0.0181	1.2718	0.0202
	Total		0.0161		0.0166		0.0184		0.0204

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Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
Henrico Jurisdiction									
51-087-00004 50040	Branscome Inc - Richmond Asphalt	3050020 8	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3050020 8	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		3050020 1	0.0016	0.9713	0.0016	1.0309	0.0017	1.1363	0.0018
	Total		0.0017		0.0017		0.0017		0.0019
51-087-00027 50358	CadmusMack Byrd Press Division	4050041 1	0.0002	1.0819	0.0003	1.1977	0.0003	1.3201	0.0003
		1020060 3	0.0008	1.0000	0.0008	1.0000	0.0008	1.0000	0.0008
		4050041 3	0.0010	1.0819	0.0011	1.1977	0.0013	1.3201	0.0014
		4050041 3	0.0030	1.0819	0.0032	1.1977	0.0035	1.3201	0.0039
		4050041 3	0.0037	1.0819	0.0040	1.1977	0.0044	1.3201	0.0048
		4050041 1	0.0046	1.0819	0.0050	1.1977	0.0055	1.3201	0.0061
		4050041 3	0.0113	1.0819	0.0122	1.1977	0.0135	1.3201	0.0149
		4050041 3	0.0114	1.0819	0.0124	1.1977	0.0137	1.3201	0.0151
		4050041 3	0.0144	1.0819	0.0156	1.1977	0.0173	1.3201	0.0190
		4050041 1	0.0333	1.0819	0.0360	1.1977	0.0399	1.3201	0.0440
		4050041 3	0.0483	1.0819	0.0523	1.1977	0.0578	1.3201	0.0638
	Total		0.1320		0.1427		0.1579		0.1740
51-087-00030 50375	Stone Container Corporation Lewis Rd	1020050 4	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		1020050 4	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		1020060 2	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		1020060 2	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		4909999 9	0.0015	1.0404	0.0016	1.1389	0.0017	1.2554	0.0019
		4909999 9	0.0100	1.0404	0.0104	1.1389	0.0114	1.2554	0.0126
	Total		0.0125		0.0130		0.0141		0.0155
51-087-00083 50703	Kraft Foods Global-Richmond Bakery	3900068 9	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		3029000 3	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003

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Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		10500206	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		10200603	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
		10500206	0.0006	1.0000	0.0006	1.0000	0.0006	1.0000	0.0006
		10200602	0.0007	1.0000	0.0007	1.0000	0.0007	1.0000	0.0007
		39000689	0.0008	1.0000	0.0008	1.0000	0.0008	1.0000	0.0008
		10500206	0.0011	1.0000	0.0011	1.0000	0.0011	1.0000	0.0011
		30203202	0.0019	1.0502	0.0020	1.1496	0.0021	1.2671	0.0024
		30203202	0.0030	1.0502	0.0031	1.1496	0.0034	1.2671	0.0037
		39000689	0.0034	1.0000	0.0034	1.0000	0.0034	1.0000	0.0034
		30203201	0.0058	1.0502	0.0061	1.1496	0.0067	1.2671	0.0074
		30203202	0.0105	1.0502	0.0110	1.1496	0.0121	1.2671	0.0133
		30203201	0.0390	1.0502	0.0410	1.1496	0.0448	1.2671	0.0494
		Total	0.0682		0.0712		0.0772		0.0842
51-087-00100 50773	St Josephs Home	10300602	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10300602	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		39999992	0.0016	1.1585	0.0019	1.4790	0.0024	1.8064	0.0029
		Total	0.0017		0.0020		0.0025		0.0030
51-087-00130 50880	Quebecor Printing Richmond Incorporated	40500514	0.0001	1.0819	0.0002	1.1977	0.0002	1.3201	0.0002
		40200701	0.0003	1.0852	0.0004	1.2629	0.0004	1.4596	0.0005
		10200602	0.0022	1.0000	0.0022	1.0000	0.0022	1.0000	0.0022
		40500511	0.1102	1.0819	0.1192	1.1977	0.1319	1.3201	0.1454
		40500511	0.1406	1.0819	0.1521	1.1977	0.1683	1.3201	0.1856
		40500511	0.2731	1.0819	0.2955	1.1977	0.3271	1.3201	0.3606
		40500511	0.2888	1.0819	0.3124	1.1977	0.3459	1.3201	0.3812
		40500511	0.3749	1.0819	0.4056	1.1977	0.4490	1.3201	0.4949

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		4050051 1	0.3874	1.0819	0.4192	1.1977	0.4640	1.3201	0.5114
		4050051 1	0.4565	1.0819	0.4939	1.1977	0.5467	1.3201	0.6026
	Total		2.0341		2.2006		2.4359		2.6847
51-087-00144 50949	Graphic Packaging International, Inc.	1030060 3	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		4050051 4	0.0088	1.0819	0.0095	1.1977	0.0106	1.3201	0.0116
		4050051 1	0.0115	1.0819	0.0125	1.1977	0.0138	1.3201	0.0152
		4050051 4	0.0172	1.0819	0.0186	1.1977	0.0206	1.3201	0.0227
		4050051 1	0.0177	1.0819	0.0191	1.1977	0.0212	1.3201	0.0233
		4050051 1	0.1015	1.0819	0.1098	1.1977	0.1216	1.3201	0.1340
		4050051 1	0.1058	1.0819	0.1145	1.1977	0.1267	1.3201	0.1397
		Total	0.2630		0.2845		0.3149		0.3470
51-087-00156 50997	Dominion - Darbytown	2020010 1	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		2020020 1	0.0016	1.0000	0.0016	1.0000	0.0016	1.0000	0.0016
	Total		0.0021		0.0021		0.0021		0.0021
51-087-00161 51036	Johns Manville Corporation	1030060 3	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		4050051 1	0.0034	1.0819	0.0036	1.1977	0.0040	1.3201	0.0044
		3050020 2	0.0382	0.9713	0.0371	1.0309	0.0394	1.1363	0.0434
		Total	0.0417		0.0409		0.0436		0.0480
51-087-00164 51057	Print South Corporation	4050040 1	0.0000	1.0819	0.0000	1.1977	0.0000	1.3201	0.0000
		4050059 9	0.0031	1.0819	0.0034	1.1977	0.0037	1.3201	0.0041
		4050059 9	0.0093	1.0819	0.0101	1.1977	0.0112	1.3201	0.0123
		4050020 3	0.0181	1.0819	0.0196	1.1977	0.0217	1.3201	0.0239
	Total		0.0306		0.0331		0.0366		0.0404
51-087-00168 51069	BFI Waste Systems/Gas Recovery Systems	5020060 1	0.0002	1.0654	0.0002	1.1836	0.0002	1.3151	0.0003
		2010080 2	0.0113	1.0024	0.0113	1.0032	0.0113	1.0036	0.0113
	Total		0.0115		0.0115		0.0116		0.0116
51-087-00179 51103	Vanguard Plastics Inc	3999999 9	0.0112	1.1585	0.0130	1.4790	0.0166	1.8064	0.0202

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Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		4050059 9	0.0132	1.0819	0.0143	1.1977	0.0158	1.3201	0.0174
		3050031 5	0.0154	1.1011	0.0169	1.3724	0.0211	1.6763	0.0258
		Total	0.0398		0.0442		0.0535		0.0634
51-087-00209 51227	BFI Old Dominion Landfill	5020060 1	0.0002	1.0654	0.0003	1.1836	0.0003	1.3151	0.0003
		5028000 1	0.0038	1.0654	0.0041	1.1836	0.0046	1.3151	0.0051
		Total	0.0041		0.0044		0.0048		0.0054
51-087-00210 51232	Infineon Technologies Richmond	1020050 1	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		1020050 1	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		1020060 2	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		2010010 2	0.0000	0.7725	0.0000	0.8049	0.0000	0.8128	0.0000
		1020060 2	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		1020060 2	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		1020060 2	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		1020060 2	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		3999999 9	0.0011	1.1585	0.0013	1.4790	0.0016	1.8064	0.0020
		4909999 9	0.0371	1.0404	0.0386	1.1389	0.0423	1.2554	0.0466
		Total	0.0391		0.0408		0.0448		0.0495
51-087-00217 51286	Henrico County DPU Springfield Road Landfill	5028000 1	0.0139	1.0654	0.0148	1.1836	0.0164	1.3151	0.0182
	Total	0.0139		0.0148		0.0164		0.0182	
51-087-50039 50039	Blakemore Construction Corp Portugee Rd	3050020 8	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3050020 8	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		3050020 1	0.0007	0.9713	0.0007	1.0309	0.0008	1.1363	0.0008
		3050020 1	0.0078	0.9713	0.0075	1.0309	0.0080	1.1363	0.0088
	Total	0.0086		0.0084		0.0089		0.0098	
Prince George Jurisdiction									
51-149-00007 50564	US Army Fort Lee	2020010 2	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		2020010 2	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001

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Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018		
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	
		10300603	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002	
		10300603	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002	
		20200102	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004	
		20200102	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005	
		20200102	0.0008	1.0000	0.0008	1.0000	0.0008	1.0000	0.0008	
		20200102	0.0014	1.0000	0.0014	1.0000	0.0014	1.0000	0.0014	
		10300603	0.0021	1.0000	0.0021	1.0000	0.0021	1.0000	0.0021	
		Total	0.0057		0.0057		0.0057		0.0057	
51-149-00062 51009	Columbia Gas Transmission Corp-Prince George	10200603	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000	
		20200403	0.0015	1.0000	0.0015	1.0000	0.0015	1.0000	0.0015	
		20300201	0.0062	1.0000	0.0062	1.0000	0.0062	1.0000	0.0062	
		20200403	0.0090	1.0000	0.0090	1.0000	0.0090	1.0000	0.0090	
		20200403	0.0109	1.0000	0.0109	1.0000	0.0109	1.0000	0.0109	
		20200403	0.0116	1.0000	0.0116	1.0000	0.0116	1.0000	0.0116	
		20200403	0.0149	1.0000	0.0149	1.0000	0.0149	1.0000	0.0149	
		20200403	0.0273	1.0000	0.0273	1.0000	0.0273	1.0000	0.0273	
		Total	0.0815		0.0815		0.0815		0.0815	
Colonial Heights Jurisdiction										
51-570-00105 50833	Roslyn Converters Inc	39000689	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002	
		40500599	0.0011	1.0819	0.0012	1.1977	0.0013	1.3201	0.0015	
		40500802	0.0024	1.0819	0.0026	1.1977	0.0029	1.3201	0.0032	
		40500511	0.0057	1.0819	0.0062	1.1977	0.0068	1.3201	0.0075	
		40500599	0.0093	1.0819	0.0101	1.1977	0.0112	1.3201	0.0123	
		40500511	0.0118	1.0819	0.0128	1.1977	0.0142	1.3201	0.0156	
		40500511	0.0121	1.0819	0.0131	1.1977	0.0145	1.3201	0.0160	
		40500599	0.0199	1.0819	0.0216	1.1977	0.0239	1.3201	0.0263	

Table 3.2.2-1									
Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		4050059 9	0.0211	1.0819	0.0228	1.1977	0.0252	1.3201	0.0278
	Total		0.0837		0.0906		0.1002		0.1105
51-570-00178 51282	Sun Chemical Corporation GPI	3010209 9	0.0000	1.0462	0.0000	1.1514	0.0000	1.2691	0.0000
		3010209 9	0.0000	1.0462	0.0000	1.1514	0.0000	1.2691	0.0000
		3010209 9	0.0003	1.0462	0.0004	1.1514	0.0004	1.2691	0.0004
		3010209 9	0.0074	1.0462	0.0078	1.1514	0.0085	1.2691	0.0094
		3010209 9	0.0187	1.0462	0.0196	1.1514	0.0216	1.2691	0.0238
		3010209 9	0.0216	1.0462	0.0226	1.1514	0.0249	1.2691	0.0274
		3010209 9	0.0324	1.0462	0.0339	1.1514	0.0374	1.2691	0.0412
	Total		0.0806		0.0843		0.0928		0.1023
Hopewell Jurisdiction									
51-670-00003 50370	Stone Container Corporation Hopewell	3070010 1	0.0003	1.1006	0.0003	1.2778	0.0003	1.4808	0.0004
		3070012 2	0.0003	1.0731	0.0003	1.1817	0.0003	1.3025	0.0003
		4040015 0	0.0003	1.0029	0.0003	1.0866	0.0004	1.1977	0.0004
		3070012 0	0.0006	1.0731	0.0007	1.1817	0.0007	1.3025	0.0008
		3070011 8	0.0009	1.1006	0.0010	1.2778	0.0012	1.4808	0.0014
		3070019 9	0.0014	1.1006	0.0015	1.2778	0.0018	1.4808	0.0021
		3070012 0	0.0022	1.0731	0.0023	1.1817	0.0026	1.3025	0.0028
		3999999 9	0.0029	1.1585	0.0033	1.4790	0.0042	1.8064	0.0052
		3078880 1	0.0037	1.0952	0.0041	1.2722	0.0047	1.4782	0.0055
		3078880 1	0.0037	1.0952	0.0041	1.2722	0.0047	1.4782	0.0055
		3078880 1	0.0037	1.0952	0.0041	1.2722	0.0047	1.4782	0.0055
		3070011 8	0.0045	1.1006	0.0050	1.2778	0.0058	1.4808	0.0067
		3070011 3	0.0047	1.1006	0.0052	1.2778	0.0060	1.4808	0.0070
		3070011 8	0.0055	1.1006	0.0060	1.2778	0.0070	1.4808	0.0081
		3070011 8	0.0057	1.1006	0.0062	1.2778	0.0072	1.4808	0.0084

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Table 3.2.2-1									
Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		3070011 8	0.0057	1.1006	0.0062	1.2778	0.0072	1.4808	0.0084
		1020020 2	0.0080	1.0000	0.0080	1.0000	0.0080	1.0000	0.0080
		3070011 2	0.0074	1.1006	0.0081	1.2778	0.0094	1.4808	0.0109
		3070010 2	0.0081	1.1006	0.0090	1.2778	0.0104	1.4808	0.0121
		3070010 2	0.0082	1.1006	0.0090	1.2778	0.0105	1.4808	0.0122
		3070012 0	0.0150	1.0731	0.0160	1.1817	0.0177	1.3025	0.0195
		3078880 1	0.0158	1.0952	0.0173	1.2722	0.0200	1.4782	0.0233
		3070010 6	0.0265	1.1006	0.0292	1.2778	0.0338	1.4808	0.0392
		3078880 1	0.0327	1.0952	0.0358	1.2722	0.0416	1.4782	0.0483
		3070012 0	0.0343	1.0731	0.0368	1.1817	0.0405	1.3025	0.0447
		3070011 1	0.0366	1.1006	0.0403	1.2778	0.0468	1.4808	0.0542
		3070010 5	0.0503	1.1006	0.0554	1.2778	0.0643	1.4808	0.0745
		3070012 0	0.0594	1.0731	0.0638	1.1817	0.0702	1.3025	0.0774
		3070011 8	0.0583	1.1006	0.0642	1.2778	0.0745	1.4808	0.0864
		3070012 0	0.1313	1.0731	0.1408	1.1817	0.1551	1.3025	0.1710
		3070011 0	0.1677	1.1006	0.1846	1.2778	0.2143	1.4808	0.2483
		1020090 1	0.5112	1.0000	0.5112	1.0000	0.5112	1.0000	0.5112
	Total		1.2167		1.2800		1.3873		1.5094
51-670-00006 50363	Hercules Inc Aqualon Div	3011329 9	0.0023	1.0404	0.0024	1.1389	0.0026	1.2554	0.0029
		4909999 9	0.0023	1.0404	0.0024	1.1389	0.0026	1.2554	0.0029
		4909999 9	0.0066	1.0404	0.0069	1.1389	0.0075	1.2554	0.0083
		4909999 9	0.0742	1.0404	0.0772	1.1389	0.0845	1.2554	0.0931
		4909999 9	0.1152	1.0404	0.1198	1.1389	0.1312	1.2554	0.1446
		4909999 9	0.3352	1.0404	0.3487	1.1389	0.3817	1.2554	0.4208
		4909999 9	0.6963	1.0404	0.7244	1.1389	0.7930	1.2554	0.8741
	Total		1.2320		1.2817		1.4031		1.5466

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Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
51-670-00026 50232	Honeywell Nylon Inc-Hopewell	1020060 3	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3012020 6	0.0000	1.0404	0.0000	1.1389	0.0000	1.2554	0.0000
		3012100 7	0.0000	1.0404	0.0000	1.1389	0.0000	1.2554	0.0000
		1020060 3	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		1030060 3	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3010010 5	0.0001	1.0404	0.0001	1.1389	0.0001	1.2554	0.0001
		1030060 2	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		4089999 5	0.0001	1.0404	0.0001	1.1389	0.0001	1.2554	0.0001
		3012100 7	0.0001	1.0404	0.0001	1.1389	0.0001	1.2554	0.0001
		3019999 9	0.0002	1.0484	0.0002	1.1506	0.0002	1.2682	0.0002
		3999001 3	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		3011582 2	0.0002	1.0404	0.0002	1.1389	0.0002	1.2554	0.0003
		1020060 2	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		1020060 2	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
51-670-00026 50232	Honeywell Nylon Inc-Hopewell	3011582 2	0.0004	1.0404	0.0004	1.1389	0.0005	1.2554	0.0005
		3012100 8	0.0004	1.0404	0.0005	1.1389	0.0005	1.2554	0.0006
		2030010 1	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
		3019999 8	0.0005	1.0484	0.0005	1.1506	0.0006	1.2682	0.0006
		3012020 6	0.0005	1.0404	0.0005	1.1389	0.0006	1.2554	0.0007
		3012100 5	0.0006	1.0404	0.0006	1.1389	0.0007	1.2554	0.0007
		1020130 1	0.0007	1.0000	0.0007	1.0000	0.0007	1.0000	0.0007
		3010010 6	0.0007	1.0404	0.0007	1.1389	0.0008	1.2554	0.0009
		3019999 9	0.0007	1.0484	0.0007	1.1506	0.0008	1.2682	0.0009
		3012100 6	0.0009	1.0404	0.0009	1.1389	0.0010	1.2554	0.0011
		3011582 2	0.0009	1.0404	0.0009	1.1389	0.0010	1.2554	0.0011

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area								
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor
		3012100 5	0.0009	1.0404	0.0009	1.1389	0.0010	1.2554
		3012100 1	0.0009	1.0404	0.0009	1.1389	0.0010	1.2554
		4030109 8	0.0011	1.0029	0.0011	1.0866	0.0012	1.1977
		2030010 1	0.0014	1.0000	0.0014	1.0000	0.0014	1.0000
		3010010 5	0.0014	1.0404	0.0014	1.1389	0.0016	1.2554
		3012100 1	0.0014	1.0404	0.0015	1.1389	0.0016	1.2554
		3010019 9	0.0014	1.0404	0.0015	1.1389	0.0016	1.2554
		1020060 1	0.0015	1.0000	0.0015	1.0000	0.0015	1.0000
		3012020 6	0.0015	1.0404	0.0015	1.1389	0.0017	1.2554
		4070400 7	0.0015	1.0404	0.0015	1.1389	0.0017	1.2554
		4089999 5	0.0016	1.0404	0.0017	1.1389	0.0018	1.2554
		3010010 6	0.0016	1.0404	0.0017	1.1389	0.0019	1.2554
		3019999 9	0.0016	1.0484	0.0017	1.1506	0.0019	1.2682
		3019999 9	0.0017	1.0484	0.0018	1.1506	0.0019	1.2682
		3019999 8	0.0019	1.0484	0.0020	1.1506	0.0022	1.2682
		3010030 9	0.0019	1.0791	0.0021	1.2041	0.0023	1.3272
		3011582 2	0.0024	1.0404	0.0025	1.1389	0.0027	1.2554
		3019999 9	0.0035	1.0484	0.0037	1.1506	0.0041	1.2682
		1020060 2	0.0040	1.0000	0.0040	1.0000	0.0040	1.0000
		3011582 2	0.0042	1.0404	0.0043	1.1389	0.0047	1.2554
		3011582 2	0.0047	1.0404	0.0049	1.1389	0.0054	1.2554
		4070600 3	0.0054	1.0404	0.0057	1.1389	0.0062	1.2554
		3012100 7	0.0058	1.0404	0.0060	1.1389	0.0066	1.2554
		3012100 1	0.0064	1.0404	0.0067	1.1389	0.0073	1.2554
		3010010 5	0.0069	1.0404	0.0071	1.1389	0.0078	1.2554

Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		30100105	0.0069	1.0404	0.0071	1.1389	0.0078	1.2554	0.0086
		30100105	0.0069	1.0404	0.0071	1.1389	0.0078	1.2554	0.0086
		301999999	0.0069	1.0484	0.0072	1.1506	0.0080	1.2682	0.0088
51-670-00026 50232	Honeywell Nylon Inc-Hopewell	40700815	0.0084	1.0404	0.0087	1.1389	0.0095	1.2554	0.0105
		10200401	0.0091	1.0000	0.0091	1.0000	0.0091	1.0000	0.0091
		30121001	0.0089	1.0404	0.0093	1.1389	0.0102	1.2554	0.0112
		30121001	0.0089	1.0404	0.0093	1.1389	0.0102	1.2554	0.0112
		30199998	0.0089	1.0484	0.0093	1.1506	0.0102	1.2682	0.0113
		30121008	0.0090	1.0404	0.0094	1.1389	0.0103	1.2554	0.0113
		30121008	0.0090	1.0404	0.0094	1.1389	0.0103	1.2554	0.0113
		30115822	0.0093	1.0404	0.0096	1.1389	0.0106	1.2554	0.0116
		30115822	0.0109	1.0404	0.0113	1.1389	0.0124	1.2554	0.0137
		30121007	0.0116	1.0404	0.0120	1.1389	0.0132	1.2554	0.0145
		30121080	0.0120	1.0404	0.0125	1.1389	0.0136	1.2554	0.0150
		30113006	0.0123	1.0791	0.0132	1.2041	0.0148	1.3272	0.0163
		30115822	0.0144	1.0404	0.0150	1.1389	0.0164	1.2554	0.0181
		30199999	0.0163	1.0484	0.0171	1.1506	0.0188	1.2682	0.0207
		30121001	0.0168	1.0404	0.0174	1.1389	0.0191	1.2554	0.0210
		30121001	0.0179	1.0404	0.0186	1.1389	0.0204	1.2554	0.0224
		30120201	0.0196	1.0404	0.0204	1.1389	0.0223	1.2554	0.0246
		30100106	0.0236	1.0404	0.0245	1.1389	0.0269	1.2554	0.0296
		30121009	0.0249	1.0404	0.0259	1.1389	0.0283	1.2554	0.0312
		40799999	0.0269	1.0404	0.0280	1.1389	0.0307	1.2554	0.0338
		30121006	0.0335	1.0404	0.0349	1.1389	0.0382	1.2554	0.0421
		30121009	0.0336	1.0404	0.0350	1.1389	0.0383	1.2554	0.0422

Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		10200601	0.0453	1.0000	0.0453	1.0000	0.0453	1.0000	0.0453
		30121006	0.0570	1.0404	0.0593	1.1389	0.0649	1.2554	0.0715
		40301099	0.0593	1.0029	0.0595	1.0866	0.0645	1.1977	0.0711
		30100108	0.0590	1.0404	0.0614	1.1389	0.0672	1.2554	0.0740
		30121008	0.0662	1.0404	0.0689	1.1389	0.0754	1.2554	0.0831
		30115801	0.0783	1.0404	0.0815	1.1389	0.0892	1.2554	0.0983
		40706003	0.0832	1.0404	0.0866	1.1389	0.0948	1.2554	0.1045
		30121080	0.1300	1.0404	0.1353	1.1389	0.1481	1.2554	0.1632
		30109110	0.1516	1.0404	0.1577	1.1389	0.1727	1.2554	0.1903
		30100109	0.4910	1.0404	0.5108	1.1389	0.5592	1.2554	0.6163
		30113003	0.4766	1.0791	0.5143	1.2041	0.5738	1.3272	0.6325
		30121080	0.5359	1.0404	0.5576	1.1389	0.6104	1.2554	0.6728
		30113004	0.5176	1.0791	0.5586	1.2041	0.6233	1.3272	0.6870
		10200603	0.6988	1.0000	0.6988	1.0000	0.6988	1.0000	0.6988
		30115880	0.6780	1.0404	0.7054	1.1389	0.7722	1.2554	0.8512
		30113004	0.8541	1.0791	0.9217	1.2041	1.0284	1.3272	1.1335
	Total		5.4232		5.6818		6.1895		6.7443
51-670-00053 50735	Hopewell WWTP	50290006	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		50200506	0.0180	1.0654	0.0191	1.1836	0.0213	1.3151	0.0236
		50200515	0.1374	1.0654	0.1464	1.1836	0.1626	1.3151	0.1806
		Total	0.1556		0.1657		0.1841		0.2045
51-670-00054 50891	Goldschmidt Chemical Corp	30199999	0.0000	1.0484	0.0000	1.1506	0.0000	1.2682	0.0000
		10300603	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10300603	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10300603	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		10300603	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001

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Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		10300603	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		30199999	0.0002	1.0484	0.0003	1.1506	0.0003	1.2682	0.0003
		30199999	0.0057	1.0484	0.0060	1.1506	0.0065	1.2682	0.0072
		30199999	0.0237	1.0484	0.0248	1.1506	0.0272	1.2682	0.0300
		30199999	0.0337	1.0484	0.0354	1.1506	0.0388	1.2682	0.0428
	Total		0.0636		0.0666		0.0731		0.0806
51-670-00055 50950	James River Cogeneration Company	10100204	0.0002	0.9744	0.0002	1.0634	0.0002	1.1947	0.0002
		10100204	0.0006	0.9744	0.0006	1.0634	0.0006	1.1947	0.0007
	Total		0.0008		0.0008		0.0008		0.0009
51-670-00058 50967	Hopewell Cogeneration Ltd Partnership	10200505	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		40301021	0.0007	1.0029	0.0007	1.0866	0.0007	1.1977	0.0008
		40301020	0.0009	1.0029	0.0009	1.0866	0.0010	1.1977	0.0010
		10200604	0.0123	1.0000	0.0123	1.0000	0.0123	1.0000	0.0123
		20100201	0.0118	1.2886	0.0152	1.7237	0.0204	1.7988	0.0212
		20100101	0.0198	0.7725	0.0153	0.8049	0.0159	0.8128	0.0161
		20100201	0.0120	1.2886	0.0154	1.7237	0.0206	1.7988	0.0215
		20100201	0.0123	1.2886	0.0159	1.7237	0.0213	1.7988	0.0222
		20100101	0.0211	0.7725	0.0163	0.8049	0.0170	0.8128	0.0171
		20100101	0.0224	0.7725	0.0173	0.8049	0.0181	0.8128	0.0182
		10200604	0.0203	1.0000	0.0203	1.0000	0.0203	1.0000	0.0203
	Total		0.1339		0.1299		0.1478		0.1512
Petersburg Jurisdiction									
51-730-00001 50052	Southside Virginia Training Center	10300209	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		10300209	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		40400402	0.0004	1.0129	0.0004	1.0447	0.0004	1.0792	0.0005
		10300209	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
		20300101	0.0013	1.0000	0.0013	1.0000	0.0013	1.0000	0.0013

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Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		4040040 2	0.0173	1.0129	0.0175	1.0447	0.0181	1.0792	0.0187
		Total	0.0202		0.0205		0.0210		0.0216
51-730-00048 50292	Brenco Inc	4010039 9	0.0007	1.1448	0.0009	1.4390	0.0011	1.7577	0.0013
		4010039 9	0.0009	1.1448	0.0010	1.4390	0.0013	1.7577	0.0016
		1020060 2	0.0016	1.0000	0.0016	1.0000	0.0016	1.0000	0.0016
		4010039 9	0.0028	1.1448	0.0031	1.4390	0.0040	1.7577	0.0048
		4010039 9	0.0041	1.1448	0.0047	1.4390	0.0059	1.7577	0.0072
		4010039 9	0.0060	1.1448	0.0069	1.4390	0.0087	1.7577	0.0106
		3150500 3	0.0203	1.0235	0.0208	1.1174	0.0227	1.2373	0.0252
		4010030 8	0.1651	1.1448	0.1890	1.4390	0.2376	1.7577	0.2902
		Total	0.2016		0.2281		0.2828		0.3425
Richmond City Jurisdiction									
51-760-00002 50534	Reynolds Metals Company Richmond Foil Plant	1030060 3	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		3900068 9	0.0008	1.0000	0.0008	1.0000	0.0008	1.0000	0.0008
		3900068 9	0.0022	1.0000	0.0022	1.0000	0.0022	1.0000	0.0022
		4909999 9	0.0050	1.0404	0.0052	1.1389	0.0057	1.2554	0.0063
		4909999 9	0.0069	1.0404	0.0072	1.1389	0.0079	1.2554	0.0087
		4909999 9	0.0094	1.0404	0.0098	1.1389	0.0107	1.2554	0.0118
		4909999 9	0.0098	1.0404	0.0102	1.1389	0.0112	1.2554	0.0123
		4909999 9	0.0181	1.0404	0.0188	1.1389	0.0206	1.2554	0.0227
		4909999 9	0.0228	1.0404	0.0237	1.1389	0.0259	1.2554	0.0286
		4909999 9	0.0265	1.0404	0.0276	1.1389	0.0302	1.2554	0.0332
		4909999 9	0.0719	1.0404	0.0748	1.1389	0.0819	1.2554	0.0902
		4909999 9	0.1901	1.0404	0.1977	1.1389	0.2165	1.2554	0.2386
		4909999 9	0.2231	1.0404	0.2321	1.1389	0.2541	1.2554	0.2800

Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		49099999	0.3430	1.0404	0.3569	1.1389	0.3907	1.2554	0.4306
		49099999	0.4358	1.0404	0.4534	1.1389	0.4964	1.2554	0.5471
		49099999	4.4830	1.0404	4.6641	1.1389	5.1059	1.2554	5.6278
		Total	5.8483		6.0844		6.6604		7.3409
51-760-00003 50531	Sampson Coatings Inc Hull St Office	10200603	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10200504	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		30101401	0.0131	1.0487	0.0137	1.1477	0.0150	1.2650	0.0165
		30101499	0.0869	1.0487	0.0912	1.1477	0.0998	1.2650	0.1100
		30101401	0.1361	1.0487	0.1427	1.1477	0.1561	1.2650	0.1721
		Total	0.2361		0.2476		0.2709		0.2986
51-760-00004 50356	Sonoco Products Co	10200601	0.0069	1.0000	0.0069	1.0000	0.0069	1.0000	0.0069
		10200601	0.0113	1.0000	0.0113	1.0000	0.0113	1.0000	0.0113
		30700401	0.0241	1.0731	0.0258	1.1817	0.0284	1.3025	0.0313
		Total	0.0422		0.0440		0.0466		0.0495
51-760-00005 50031	Miller Manufacturing Company	40200901	0.0001	1.0852	0.0001	1.2629	0.0001	1.4596	0.0001
		40500812	0.0001	1.0819	0.0001	1.1977	0.0001	1.3201	0.0001
		49099999	0.0002	1.0404	0.0002	1.1389	0.0002	1.2554	0.0002
		40200712	0.0008	1.0852	0.0009	1.2629	0.0010	1.4596	0.0011
		40200901	0.0116	1.0852	0.0126	1.2629	0.0147	1.4596	0.0169
		49099999	0.0179	1.0404	0.0186	1.1389	0.0204	1.2554	0.0225
		49099999	0.0561	1.0404	0.0583	1.1389	0.0639	1.2554	0.0704
		Total	0.0867		0.0908		0.1003		0.1114
51-760-00009 50082	Philip Morris USA Inc Leaf Processing Facility	10200504	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10200504	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		39999992	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000

Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		3999999 2	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000
		3020339 9	0.0001	0.9217	0.0001	0.9676	0.0001	1.0666	0.0001
		3020339 9	0.0004	0.9217	0.0004	0.9676	0.0004	1.0666	0.0004
		1020060 2	0.0013	1.0000	0.0013	1.0000	0.0013	1.0000	0.0013
		1020060 2	0.0019	1.0000	0.0019	1.0000	0.0019	1.0000	0.0019
		3020339 9	0.0023	0.9217	0.0021	0.9676	0.0022	1.0666	0.0025
		1020060 2	0.0026	1.0000	0.0026	1.0000	0.0026	1.0000	0.0026
		3020339 9	0.0463	0.9217	0.0427	0.9676	0.0448	1.0666	0.0494
		Total		0.0549		0.0511		0.0534	
51-760-00012 50355	Richmond Paperboard	1020060 2	0.0027	1.0000	0.0027	1.0000	0.0027	1.0000	0.0027
		1020040 1	0.0056	1.0000	0.0056	1.0000	0.0056	1.0000	0.0056
		3070040 1	0.0152	1.0731	0.0163	1.1817	0.0180	1.3025	0.0198
		Total		0.0236		0.0247		0.0263	
51-760-00013 50126	VCU East Plant	1020040 1	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		1020040 1	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		1020040 1	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		1020060 1	0.0024	1.0000	0.0024	1.0000	0.0024	1.0000	0.0024
		1020060 1	0.0033	1.0000	0.0033	1.0000	0.0033	1.0000	0.0033
		1020060 1	0.0045	1.0000	0.0045	1.0000	0.0045	1.0000	0.0045
		Total		0.0107		0.0107		0.0107	
51-760-00037 50043	APAC-Virginia Inc Rchmd Plt #412	3050020 8	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3050020 7	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		3050020 6	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		3050020 1	0.0187	0.9713	0.0182	1.0309	0.0193	1.1363	0.0213
		Total		0.0189		0.0184		0.0195	
51-760-00038 50046	Interstate Construction Corp	3050025 2	0.0202	0.9713	0.0196	1.0309	0.0208	1.1363	0.0230

Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
	Total		0.0202		0.0196		0.0208		0.0230
51-760-00052 50080	Philip Morris USA Inc - Blended Leaf (BL) Plant	3020339 9	0.0007	0.9217	0.0007	0.9676	0.0007	1.0666	0.0008
		4070089 8	0.0012	1.0404	0.0012	1.1389	0.0013	1.2554	0.0015
		3020339 9	0.0016	0.9217	0.0015	0.9676	0.0015	1.0666	0.0017
		3020339 9	0.0016	0.9217	0.0015	0.9676	0.0016	1.0666	0.0017
		3020339 9	0.0020	0.9217	0.0018	0.9676	0.0019	1.0666	0.0021
		3020339 9	0.0021	0.9217	0.0020	0.9676	0.0021	1.0666	0.0023
		3020339 9	0.0022	0.9217	0.0021	0.9676	0.0022	1.0666	0.0024
		3020339 9	0.0024	0.9217	0.0022	0.9676	0.0023	1.0666	0.0025
		3020339 9	0.0024	0.9217	0.0023	0.9676	0.0024	1.0666	0.0026
		3020339 9	0.0028	0.9217	0.0026	0.9676	0.0028	1.0666	0.0030
		3020339 9	0.0031	0.9217	0.0029	0.9676	0.0030	1.0666	0.0033
		3020339 9	0.0045	0.9217	0.0041	0.9676	0.0044	1.0666	0.0048
		3020339 9	0.0050	0.9217	0.0046	0.9676	0.0049	1.0666	0.0054
		3020339 9	0.0056	0.9217	0.0052	0.9676	0.0055	1.0666	0.0060
		3020339 9	0.0058	0.9217	0.0054	0.9676	0.0056	1.0666	0.0062
		3020339 9	0.0065	0.9217	0.0060	0.9676	0.0063	1.0666	0.0069
		3020339 9	0.0071	0.9217	0.0065	0.9676	0.0069	1.0666	0.0076
		3020339 9	0.0082	0.9217	0.0075	0.9676	0.0079	1.0666	0.0087
		3020339 9	0.0276	0.9217	0.0254	0.9676	0.0267	1.0666	0.0294
		3020339 9	0.0306	0.9217	0.0282	0.9676	0.0296	1.0666	0.0326
		3020339 9	0.0329	0.9217	0.0303	0.9676	0.0318	1.0666	0.0351
		3020339 9	0.0390	0.9217	0.0360	0.9676	0.0378	1.0666	0.0416
		3020339 9	0.0391	0.9217	0.0360	0.9676	0.0378	1.0666	0.0417
		3020339 9	0.0428	0.9217	0.0395	0.9676	0.0414	1.0666	0.0457

Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		3020339 9	0.0640	0.9217	0.0590	0.9676	0.0619	1.0666	0.0683
		3020339 9	0.0855	0.9217	0.0788	0.9676	0.0827	1.0666	0.0912
		3020339 9	0.0907	0.9217	0.0836	0.9676	0.0877	1.0666	0.0967
		Total	0.5171		0.4767		0.5006		0.5517
51-760-00056 50085	Packaging Corporation of America	4020070 1	0.0009	1.0852	0.0010	1.2629	0.0011	1.4596	0.0013
		1020060 2	0.0013	1.0000	0.0013	1.0000	0.0013	1.0000	0.0013
		4050030 1	0.0284	1.0819	0.0307	1.1977	0.0340	1.3201	0.0375
		4050059 8	0.1631	1.0819	0.1765	1.1977	0.1954	1.3201	0.2154
		Total	0.1937		0.2094		0.2318		0.2554
51-760-00063 50110	TCS Materials - Deepwater Terminal Rd	1030050 1	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
	Total		0.0000		0.0000		0.0000		0.0000
51-760-00072 50143	Carter Printing	1030050 1	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		4909999 9	0.0179	1.0404	0.0186	1.1389	0.0203	1.2554	0.0224
		4050041 3	0.0258	1.0819	0.0279	1.1977	0.0309	1.3201	0.0341
		Total	0.0437		0.0465		0.0513		0.0565
51-760-00075 50168	Transmontaigne Terminating Inc Richmond Atlantic	4071469 8	0.0000	1.0404	0.0000	1.1389	0.0000	1.2554	0.0000
		4030119 7	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0000
		4071469 7	0.0000	1.0404	0.0000	1.1389	0.0000	1.2554	0.0000
		4030119 7	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0000
		4030119 7	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0000
		4030115 1	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0000
		4060013 5	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0000
		4060013 5	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977	0.0001
		4030101 9	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977	0.0001
		4030115 1	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977	0.0001
		4030119 7	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977	0.0001

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area								
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor
51-760-00084 50199	Interbake Foods Inc	4030101 9	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977
		4030102 1	0.0002	1.0029	0.0002	1.0866	0.0002	1.1977
		4030119 7	0.0002	1.0029	0.0002	1.0866	0.0002	1.1977
		4030101 9	0.0002	1.0029	0.0002	1.0866	0.0002	1.1977
		4030102 0	0.0005	1.0029	0.0006	1.0866	0.0006	1.1977
		4030119 7	0.0011	1.0029	0.0011	1.0866	0.0012	1.1977
		4030115 1	0.0012	1.0029	0.0012	1.0866	0.0013	1.1977
		4040015 1	0.0013	1.0029	0.0013	1.0866	0.0015	1.1977
		4030102 1	0.0015	1.0029	0.0015	1.0866	0.0016	1.1977
		4060013 1	0.0035	1.0129	0.0035	1.0447	0.0037	1.0792
		4030115 1	0.0059	1.0029	0.0059	1.0866	0.0064	1.1977
		4030115 1	0.0062	1.0029	0.0063	1.0866	0.0068	1.1977
		4040015 3	0.0072	1.0029	0.0072	1.0866	0.0078	1.1977
		4060013 1	0.0074	1.0129	0.0075	1.0447	0.0077	1.0792
		4030115 1	0.0083	1.0029	0.0083	1.0866	0.0090	1.1977
		4040015 3	0.0151	1.0029	0.0152	1.0866	0.0165	1.1977
		4030115 1	0.0158	1.0029	0.0158	1.0866	0.0171	1.1977
		Total	0.0762		0.0765		0.0823	
51-760-00087 50209	University of Richmond	1020060 3	0.0008	1.0000	0.0008	1.0000	0.0008	1.0000
		3020320 1	0.0136	1.0502	0.0143	1.1496	0.0157	1.2671
		3020320 2	0.0847	1.0502	0.0889	1.1496	0.0973	1.2671
		Total	0.0991		0.1040		0.1138	
		1030060 2	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000
		1030060 2	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000
		1030020 8	0.0007	1.0000	0.0007	1.0000	0.0007	1.0000
		1030020 8	0.0033	1.0000	0.0033	1.0000	0.0033	1.0000

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Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		1030020 8	0.0053	1.0000	0.0053	1.0000	0.0053	1.0000	0.0053
		1030020 8	0.0066	1.0000	0.0066	1.0000	0.0066	1.0000	0.0066
		2010020 2	0.0126	1.2886	0.0163	1.7237	0.0218	1.7988	0.0227
		Total	0.0287		0.0323		0.0378		0.0388
51-760-00093 50224	Fergusson, J W and Sons, Inc.	1020060 2	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		1020060 2	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		3900068 9	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		4050051 4	0.0001	1.0819	0.0002	1.1977	0.0002	1.3201	0.0002
		4050051 1	0.0002	1.0819	0.0002	1.1977	0.0002	1.3201	0.0002
		3900068 9	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		4050051 1	0.0004	1.0819	0.0004	1.1977	0.0005	1.3201	0.0005
		4050059 9	0.0004	1.0819	0.0005	1.1977	0.0005	1.3201	0.0006
		4050051 4	0.0005	1.0819	0.0006	1.1977	0.0007	1.3201	0.0007
		4050059 9	0.0007	1.0819	0.0007	1.1977	0.0008	1.3201	0.0009
		4050051 1	0.0015	1.0819	0.0016	1.1977	0.0018	1.3201	0.0020
		4050051 1	0.0018	1.0819	0.0019	1.1977	0.0021	1.3201	0.0023
		4050051 1	0.0022	1.0819	0.0023	1.1977	0.0026	1.3201	0.0028
		4050059 9	0.0038	1.0819	0.0042	1.1977	0.0046	1.3201	0.0051
		4050059 9	0.0045	1.0819	0.0049	1.1977	0.0054	1.3201	0.0060
		4050051 1	0.0050	1.0819	0.0054	1.1977	0.0060	1.3201	0.0066
		4050059 9	0.0056	1.0819	0.0060	1.1977	0.0066	1.3201	0.0073
		4010039 9	0.0065	1.1448	0.0075	1.4390	0.0094	1.7577	0.0115
		4050059 9	0.0130	1.0819	0.0140	1.1977	0.0155	1.3201	0.0171
		4010039 9	0.0151	1.1448	0.0173	1.4390	0.0218	1.7577	0.0266
		4050051 4	0.0655	1.0819	0.0708	1.1977	0.0784	1.3201	0.0864
	Total		0.1274		0.1392		0.1577		0.1775

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Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
51-760-00097 50257	Aqua Clean Environmental of Virginia	4020090 1	0.1178	1.0852	0.1279	1.2629	0.1488	1.4596	0.1720
	Total		0.1178		0.1279		0.1488		0.1720
51-760-00098 50258	Kinder Morgan Southeast Terminals-Rchmd Terminals	4060014 1	0.0000	1.0129	0.0000	1.0447	0.0000	1.0792	0.0000
		4030100 8	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0000
		4030100 8	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0000
		4068880 2	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0000
		4030100 8	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0000
		4030100 3	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0001
		4068880 2	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0001
		4068880 2	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977	0.0001
		4030100 9	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977	0.0001
		4068880 2	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977	0.0001
		4068880 2	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977	0.0001
		4068880 2	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977	0.0002
		4068880 2	0.0002	1.0029	0.0002	1.0866	0.0002	1.1977	0.0002
		4068880 2	0.0003	1.0029	0.0003	1.0866	0.0003	1.1977	0.0003
		4030102 1	0.0004	1.0029	0.0004	1.0866	0.0004	1.1977	0.0005
		4030102 1	0.0004	1.0029	0.0004	1.0866	0.0005	1.1977	0.0005
		4040040 6	0.0009	1.0129	0.0009	1.0447	0.0009	1.0792	0.0010
		4030102 1	0.0012	1.0029	0.0013	1.0866	0.0014	1.1977	0.0015
		4030110 7	0.0018	1.0029	0.0018	1.0866	0.0020	1.1977	0.0022
		4030110 7	0.0020	1.0029	0.0020	1.0866	0.0021	1.1977	0.0024
		4030102 1	0.0022	1.0029	0.0022	1.0866	0.0024	1.1977	0.0026
		4030110 7	0.0048	1.0029	0.0048	1.0866	0.0052	1.1977	0.0057
		4030110 7	0.0058	1.0029	0.0058	1.0866	0.0063	1.1977	0.0070

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Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area								
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor
51-760-00108 50278	BP Products North America-Rchmd	40301107	0.0064	1.0029	0.0064	1.0866	0.0070	1.1977
		40301107	0.0123	1.0029	0.0124	1.0866	0.0134	1.1977
		40301107	0.0185	1.0029	0.0185	1.0866	0.0201	1.1977
		40301107	0.0193	1.0029	0.0194	1.0866	0.0210	1.1977
		40301107	0.0204	1.0029	0.0204	1.0866	0.0221	1.1977
		40500802	0.0336	1.0819	0.0364	1.1977	0.0403	1.3201
		40600141	0.0570	1.0129	0.0577	1.0447	0.0595	1.0792
		Total	0.1881		0.1919		0.2057	
		40600135	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977
		40301107	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977
		40301019	0.0000	1.0029	0.0000	1.0866	0.0001	1.1977
		40301107	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977
		40301107	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977
		40400254	0.0001	1.0029	0.0001	1.0866	0.0002	1.1977
		40301107	0.0002	1.0029	0.0002	1.0866	0.0003	1.1977
		40301107	0.0002	1.0029	0.0002	1.0866	0.0003	1.1977
		40301021	0.0005	1.0029	0.0005	1.0866	0.0005	1.1977
		40301151	0.0062	1.0029	0.0062	1.0866	0.0067	1.1977
		40301151	0.0062	1.0029	0.0062	1.0866	0.0067	1.1977
		40301151	0.0065	1.0029	0.0065	1.0866	0.0070	1.1977
		40301151	0.0065	1.0029	0.0065	1.0866	0.0070	1.1977
		40301151	0.0067	1.0029	0.0067	1.0866	0.0073	1.1977
		40600141	0.0093	1.0129	0.0094	1.0447	0.0097	1.0792
		40600141	0.0211	1.0129	0.0214	1.0447	0.0220	1.0792
		Total	0.0638		0.0643		0.0680	
								0.0728

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Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
51-760-00122 50314	Altadis USA	1020050 1	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		1020060 2	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		3029999 9	0.0402	1.0672	0.0429	1.1745	0.0472	1.2946	0.0520
		Total	0.0404		0.0431		0.0474		0.0522
51-760-00123 50334	Citgo Petroleum Corporation	4030110 7	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0000
		4030110 7	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977	0.0001
		4030101 9	0.0002	1.0029	0.0002	1.0866	0.0002	1.1977	0.0002
		4030110 7	0.0003	1.0029	0.0003	1.0866	0.0003	1.1977	0.0004
		4030110 7	0.0003	1.0029	0.0003	1.0866	0.0003	1.1977	0.0004
		4030102 1	0.0008	1.0029	0.0008	1.0866	0.0008	1.1977	0.0009
		4030110 2	0.0048	1.0029	0.0049	1.0866	0.0053	1.1977	0.0058
		4030110 2	0.0057	1.0029	0.0057	1.0866	0.0062	1.1977	0.0069
		4030110 2	0.0070	1.0029	0.0070	1.0866	0.0076	1.1977	0.0084
		4030110 2	0.0124	1.0029	0.0124	1.0866	0.0134	1.1977	0.0148
		4060014 1	0.1097	1.0129	0.1111	1.0447	0.1146	1.0792	0.1184
		Total	0.1413		0.1428		0.1489		0.1562
51-760-00129 50344	Mead Westvaco Corporation Headquarters	3999999 2	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000
		3999999 2	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000
		1020060 3	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		1020050 1	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		3900068 9	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		1020060 2	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		4050051 4	0.0003	1.0819	0.0004	1.1977	0.0004	1.3201	0.0004
		4010030 3	0.0006	1.1448	0.0007	1.4390	0.0009	1.7577	0.0011
		4050051 4	0.0012	1.0819	0.0013	1.1977	0.0014	1.3201	0.0015
		4050059 9	0.0022	1.0819	0.0024	1.1977	0.0026	1.3201	0.0029

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Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		40500514	0.0080	1.0819	0.0087	1.1977	0.0096	1.3201	0.0106
		40500514	0.0096	1.0819	0.0103	1.1977	0.0114	1.3201	0.0126
		40500514	0.0096	1.0819	0.0103	1.1977	0.0114	1.3201	0.0126
		40500514	0.0139	1.0819	0.0150	1.1977	0.0166	1.3201	0.0183
		40500514	0.0305	1.0819	0.0330	1.1977	0.0366	1.3201	0.0403
		40500599	0.0381	1.0819	0.0412	1.1977	0.0456	1.3201	0.0502
		40500599	0.0585	1.0819	0.0633	1.1977	0.0701	1.3201	0.0772
		40500599	0.0789	1.0819	0.0854	1.1977	0.0945	1.3201	0.1042
		40500599	0.0909	1.0819	0.0983	1.1977	0.1088	1.3201	0.1200
		Total	0.3426		0.3706		0.4104		0.4524
51-760-00246 50528	Carpenter Company, Richmond Plant	38500110	0.0000	1.0852	0.0000	1.2629	0.0000	1.4596	0.0000
		38500110	0.0000	1.0852	0.0000	1.2629	0.0000	1.4596	0.0000
		38500110	0.0000	1.0852	0.0000	1.2629	0.0000	1.4596	0.0000
		10201701	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		30800799	0.0000	1.1136	0.0000	1.2432	0.0000	1.3703	0.0000
		40100398	0.0000	1.1448	0.0000	1.4390	0.0000	1.7577	0.0000
		31303502	0.0000	1.1448	0.0000	1.4458	0.0000	1.7660	0.0000
		40100399	0.0000	1.1448	0.0000	1.4390	0.0000	1.7577	0.0001
		38500110	0.0001	1.0852	0.0001	1.2629	0.0001	1.4596	0.0001
		38500110	0.0001	1.0852	0.0002	1.2629	0.0002	1.4596	0.0002
		10200603	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		49099999	0.0003	1.0404	0.0003	1.1389	0.0004	1.2554	0.0004
		40100307	0.0026	1.1448	0.0030	1.4390	0.0038	1.7577	0.0046
		49099999	0.0029	1.0404	0.0030	1.1389	0.0033	1.2554	0.0037

Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		4010039 9	0.0084	1.1448	0.0096	1.4390	0.0121	1.7577	0.0148
		3080070 4	0.0134	1.1136	0.0150	1.2432	0.0167	1.3703	0.0184
		Total	0.0283		0.0316		0.0370		0.0427
51-760-00247 50533	Flint Hills Resources LP	3100010 7	0.0000	1.0886	0.0000	1.2463	0.0000	1.3884	0.0000
		1020060 2	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		1020050 1	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		4060014 1	0.0001	1.0129	0.0001	1.0447	0.0001	1.0792	0.0001
		4060014 1	0.0001	1.0129	0.0001	1.0447	0.0001	1.0792	0.0001
		4060014 1	0.0001	1.0129	0.0001	1.0447	0.0001	1.0792	0.0001
		4060014 1	0.0003	1.0129	0.0003	1.0447	0.0003	1.0792	0.0004
		4060014 1	0.0008	1.0129	0.0008	1.0447	0.0008	1.0792	0.0008
		4060014 1	0.0045	1.0129	0.0045	1.0447	0.0047	1.0792	0.0048
		4060014 1	0.0104	1.0129	0.0106	1.0447	0.0109	1.0792	0.0112
		4040011 1	0.0288	1.0242	0.0295	1.0836	0.0312	1.1484	0.0331
		Total	0.0452		0.0461		0.0484		0.0508
51-760-00264 50591	US Courthouse	1030060 3	0.0026	1.0000	0.0026	1.0000	0.0026	1.0000	0.0026
		Total	0.0026		0.0026		0.0026		0.0026
51-760-00308 50076	Philip Morris USA Manufacturing Center	3999999 2	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000
		1020050 1	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		3020339 9	0.0001	0.9217	0.0001	0.9676	0.0001	1.0666	0.0001
		3020339 9	0.0001	0.9217	0.0001	0.9676	0.0001	1.0666	0.0001
		1020060 1	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		1020060 1	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		3020339 9	0.0003	0.9217	0.0002	0.9676	0.0003	1.0666	0.0003
		3020339 9	0.0003	0.9217	0.0002	0.9676	0.0003	1.0666	0.0003
		3020339 9	0.0006	0.9217	0.0006	0.9676	0.0006	1.0666	0.0007

Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		3020339 9	0.0006	0.9217	0.0006	0.9676	0.0006	1.0666	0.0007
51-760-00308 50076	Philip Morris USA Manufacturing Center	3020339 9	0.0006	0.9217	0.0006	0.9676	0.0006	1.0666	0.0007
		3020339 9	0.0009	0.9217	0.0009	0.9676	0.0009	1.0666	0.0010
		3020339 9	0.0009	0.9217	0.0009	0.9676	0.0009	1.0666	0.0010
		3020339 9	0.0009	0.9217	0.0009	0.9676	0.0009	1.0666	0.0010
		3020339 9	0.0013	0.9217	0.0012	0.9676	0.0012	1.0666	0.0014
		3020339 9	0.0013	0.9217	0.0012	0.9676	0.0012	1.0666	0.0014
		3020339 9	0.0013	0.9217	0.0012	0.9676	0.0012	1.0666	0.0014
		3020339 9	0.0013	0.9217	0.0012	0.9676	0.0012	1.0666	0.0014
		3020339 9	0.0013	0.9217	0.0012	0.9676	0.0013	1.0666	0.0014
		3020339 9	0.0016	0.9217	0.0015	0.9676	0.0015	1.0666	0.0017
		3020339 9	0.0016	0.9217	0.0015	0.9676	0.0015	1.0666	0.0017
		3020339 9	0.0016	0.9217	0.0015	0.9676	0.0015	1.0666	0.0017
		3020339 9	0.0019	0.9217	0.0018	0.9676	0.0019	1.0666	0.0021
		3020339 9	0.0019	0.9217	0.0018	0.9676	0.0019	1.0666	0.0021
		3020339 9	0.0019	0.9217	0.0018	0.9676	0.0019	1.0666	0.0021
		3020339 9	0.0019	0.9217	0.0018	0.9676	0.0019	1.0666	0.0021
		3020339 9	0.0019	0.9217	0.0018	0.9676	0.0019	1.0666	0.0021
		3020339 9	0.0019	0.9217	0.0018	0.9676	0.0019	1.0666	0.0021
		3020339 9	0.0019	0.9217	0.0018	0.9676	0.0019	1.0666	0.0021

Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		3020339 9	0.0027	0.9217	0.0025	0.9676	0.0026	1.0666	0.0029
		1020020 2	0.0026	1.0000	0.0026	1.0000	0.0026	1.0000	0.0026
		3020339 9	0.0036	0.9217	0.0034	0.9676	0.0035	1.0666	0.0039
		3020339 9	0.0036	0.9217	0.0034	0.9676	0.0035	1.0666	0.0039
		4040030 2	0.0034	1.0886	0.0037	1.2463	0.0042	1.3884	0.0047
		3020339 9	0.0041	0.9217	0.0038	0.9676	0.0040	1.0666	0.0044
		3020339 9	0.0041	0.9217	0.0038	0.9676	0.0040	1.0666	0.0044
		3020339 9	0.0041	0.9217	0.0038	0.9676	0.0040	1.0666	0.0044
		3020339 9	0.0041	0.9217	0.0038	0.9676	0.0040	1.0666	0.0044
		3020339 9	0.0050	0.9217	0.0046	0.9676	0.0048	1.0666	0.0053
		3020339 9	0.0050	0.9217	0.0046	0.9676	0.0048	1.0666	0.0053
		3020339 9	0.0052	0.9217	0.0048	0.9676	0.0051	1.0666	0.0056
		3020339 9	0.0061	0.9217	0.0056	0.9676	0.0059	1.0666	0.0065
		3020339 9	0.0061	0.9217	0.0056	0.9676	0.0059	1.0666	0.0065
		3020339 9	0.0085	0.9217	0.0078	0.9676	0.0082	1.0666	0.0091
		3020339 9	0.0085	0.9217	0.0078	0.9676	0.0082	1.0666	0.0091
		3020339 9	0.0146	0.9217	0.0134	0.9676	0.0141	1.0666	0.0155
		3020339 9	0.0146	0.9217	0.0134	0.9676	0.0141	1.0666	0.0155
		3020339 9	0.0162	0.9217	0.0149	0.9676	0.0157	1.0666	0.0173
		3020339 9	0.0162	0.9217	0.0149	0.9676	0.0157	1.0666	0.0173
		3020339 9	0.0162	0.9217	0.0149	0.9676	0.0157	1.0666	0.0173
		3020339 9	0.0162	0.9217	0.0149	0.9676	0.0157	1.0666	0.0173
		3020339 9	0.0295	0.9217	0.0272	0.9676	0.0286	1.0666	0.0315
		3020339 9	0.0295	0.9217	0.0272	0.9676	0.0286	1.0666	0.0315

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		3999999 4	0.0350	1.1585	0.0406	1.4790	0.0518	1.8064	0.0632
		4020091 0	0.3801	1.0852	0.4124	1.2629	0.4800	1.4596	0.5547
		Total	0.6861		0.7036		0.7950		0.9079
51-760-00328 50769	Virginia Union University	1030060 2	0.0007	1.0000	0.0007	1.0000	0.0007	1.0000	0.0007
		1030060 2	0.0007	1.0000	0.0007	1.0000	0.0007	1.0000	0.0007
		1030060 2	0.0008	1.0000	0.0008	1.0000	0.0008	1.0000	0.0008
		1030060 2	0.0011	1.0000	0.0011	1.0000	0.0011	1.0000	0.0011
		1030060 2	0.0013	1.0000	0.0013	1.0000	0.0013	1.0000	0.0013
		1030060 2	0.0015	1.0000	0.0015	1.0000	0.0015	1.0000	0.0015
		1030060 2	0.0017	1.0000	0.0017	1.0000	0.0017	1.0000	0.0017
		1030060 2	0.0017	1.0000	0.0017	1.0000	0.0017	1.0000	0.0017
		1030060 2	0.0023	1.0000	0.0023	1.0000	0.0023	1.0000	0.0023
		1030060 2	0.0024	1.0000	0.0024	1.0000	0.0024	1.0000	0.0024
		1030060 2	0.0059	1.0000	0.0059	1.0000	0.0059	1.0000	0.0059
		Total	0.0200		0.0200		0.0200		0.0200
51-760-00375 50923	Richmond Barrel & Box Co Inc	1020060 3	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		1020060 3	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		4020090 1	0.0014	1.0852	0.0015	1.2629	0.0017	1.4596	0.0020
		4010030 1	0.0270	1.1448	0.0309	1.4390	0.0388	1.7577	0.0474
		4020250 1	0.0256	1.2441	0.0318	1.6113	0.0412	1.9681	0.0504
		Total	0.0540		0.0643		0.0819		0.0999
51-760-00388 51012	Liphart Steel Company Inc	4020090 1	0.0009	1.0852	0.0010	1.2629	0.0011	1.4596	0.0013
		4020092 1	0.0042	1.0852	0.0046	1.2629	0.0053	1.4596	0.0062
		4020092 0	0.0427	1.0852	0.0463	1.2629	0.0539	1.4596	0.0623
		Total	0.0478		0.0519		0.0604		0.0698

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Table 3.2.2-1									
Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
51-760-00389 50988	Dominion - Bellemeade	2030010 1	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		1020060 4	0.0179	1.0000	0.0179	1.0000	0.0179	1.0000	0.0179
		1020060 4	0.0191	1.0000	0.0191	1.0000	0.0191	1.0000	0.0191
		Total	0.0370		0.0370		0.0370		0.0370
51-760-00399 51033	Cogentrix of Richmond	1010120 1	0.0001	1.0391	0.0002	1.1216	0.0002	1.1806	0.0002
		1010120 1	0.0001	1.0391	0.0002	1.1216	0.0002	1.1806	0.0002
		1010020 4	0.0077	0.9744	0.0075	1.0634	0.0082	1.1947	0.0092
		1010020 4	0.0081	0.9744	0.0079	1.0634	0.0086	1.1947	0.0097
		1010020 4	0.0095	0.9744	0.0093	1.0634	0.0101	1.1947	0.0114
		1010020 4	0.0095	0.9744	0.0093	1.0634	0.0101	1.1947	0.0114
		Total	0.0352		0.0343		0.0374		0.0420
51-760-00400 51034	Kinder Morgan Operating LP "A"- Deepwater Terminal	4030102 1	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0000
		4030102 1	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0000
		4040011 0	0.0000	1.0242	0.0000	1.0836	0.0000	1.1484	0.0000
		4030102 1	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0000
		4060013 5	0.0000	1.0029	0.0000	1.0866	0.0000	1.1977	0.0000
		4040011 6	0.0000	1.0129	0.0000	1.0447	0.0000	1.0792	0.0000
		4040011 6	0.0000	1.0129	0.0000	1.0447	0.0000	1.0792	0.0000
		4030101 9	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977	0.0001
		4030101 9	0.0001	1.0029	0.0001	1.0866	0.0001	1.1977	0.0001
		4040011 6	0.0001	1.0129	0.0001	1.0447	0.0001	1.0792	0.0001
		4040011 6	0.0001	1.0129	0.0001	1.0447	0.0001	1.0792	0.0001
		4030101 9	0.0002	1.0029	0.0002	1.0866	0.0002	1.1977	0.0002
		4030101 9	0.0002	1.0029	0.0002	1.0866	0.0002	1.1977	0.0002

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Table 3.2.2-1

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)
		40400116	0.0002	1.0129	0.0002	1.0447	0.0002	1.0792	0.0003
		40301021	0.0003	1.0029	0.0003	1.0866	0.0003	1.1977	0.0003
		40400116	0.0003	1.0129	0.0003	1.0447	0.0003	1.0792	0.0003
		40301021	0.0003	1.0029	0.0003	1.0866	0.0003	1.1977	0.0003
		40301021	0.0006	1.0029	0.0006	1.0866	0.0006	1.1977	0.0007
		10200603	0.0008	1.0000	0.0008	1.0000	0.0008	1.0000	0.0008
		40400110	0.0020	1.0242	0.0020	1.0836	0.0021	1.1484	0.0023
		40400110	0.0024	1.0242	0.0025	1.0836	0.0027	1.1484	0.0028
		40400110	0.0033	1.0242	0.0034	1.0836	0.0036	1.1484	0.0038
		40400110	0.0038	1.0242	0.0039	1.0836	0.0042	1.1484	0.0044
		40400110	0.0039	1.0242	0.0040	1.0836	0.0042	1.1484	0.0044
		40400110	0.0051	1.0242	0.0052	1.0836	0.0055	1.1484	0.0058
		40600251	0.0226	1.0673	0.0242	1.1977	0.0271	1.3454	0.0304
		40600141	0.0302	1.0129	0.0306	1.0447	0.0315	1.0792	0.0326
		40600232	2.0370	1.0673	2.1741	1.1977	2.4396	1.3454	2.7405
		Total	2.1137		2.2532		2.5240		2.8309
51-760-00405 51055	Wythe Park Power Inc Richmond Plant	20100201	0.0106	1.2886	0.0136	1.7237	0.0182	1.7988	0.0190
		20100201	0.0318	1.2886	0.0410	1.7237	0.0548	1.7988	0.0572
	Total		0.0424		0.0546		0.0731		0.0763
51-760-00410 51075	Ethyl Corp	10200602	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		20300101	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		20400401	0.0002	0.9260	0.0002	1.1148	0.0002	1.3616	0.0003
		20400402	0.0006	0.9260	0.0006	1.1148	0.0007	1.3616	0.0008
		10200602	0.0007	1.0000	0.0007	1.0000	0.0007	1.0000	0.0007
		20400402	0.0027	0.9260	0.0025	1.1148	0.0031	1.3616	0.0037
		30101894	0.0057	1.0404	0.0059	1.1366	0.0065	1.2528	0.0072

Projected VOC Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	VOC (tpd)	Growth Factor	
		20400401	0.0067	0.9260	0.0062	1.1148	0.0075	1.3616	
		40100251	0.0226	1.1448	0.0258	1.4390	0.0325	1.7577	
		49000101	0.0714	1.0404	0.0743	1.1389	0.0814	1.2554	
		Total	0.1108		0.1164		0.1326		
51-760-00468 51894	Blue Ridge Paper Products DairyPak Paperboard	40500401	0.0000	1.0819	0.0000	1.1977	0.0000	1.3201	
		40500401	0.0000	1.0819	0.0000	1.1977	0.0000	1.3201	
		10200603	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	
		49099999	0.0015	1.0404	0.0016	1.1389	0.0018	1.2554	
		49099999	0.0019	1.0404	0.0020	1.1389	0.0021	1.2554	
		49099999	0.0200	1.0404	0.0208	1.1389	0.0228	1.2554	
		Total	0.0236		0.0245		0.0268		
Non-Attainment Area Total			31.2280		32.7049		36.0744		

Table 3.2.2-2

Projected NOx Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)
Charles City Jurisdiction									
51-036-00014 51254	Charles City County Landfill	50100410	0.0117	1.0579	0.0123	1.1891	0.0139	1.3358	0.0156
		50100410	0.0607	1.0579	0.0642	1.1891	0.0722	1.3358	0.0811
Total			0.0723		0.0765		0.0860		0.0966
Chesterfield Jurisdiction									
51-041-00001 50397	E I du Pont de Nemours and Co- Spruance Plt	39990023	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		10300602	0.0014	1.0000	0.0014	1.0000	0.0014	1.0000	0.0014
		10300602	0.0016	1.0000	0.0016	1.0000	0.0016	1.0000	0.0016
		10300602	0.0019	1.0000	0.0019	1.0000	0.0019	1.0000	0.0019
		10200602	0.0078	1.0000	0.0078	1.0000	0.0078	1.0000	0.0078
Total			0.0129		0.0129		0.0129		0.0129
51-041-00002 50396	Dominion - Chesterfield Power Station	20100102	0.0000	0.7725	0.0000	0.8049	0.0000	0.8128	0.0000
		20200401	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		10100212	7.9789		0.7474	1.0913	0.8157	1.2261	0.9164
		20100109	1.3218		0.8956	1.0420	0.9332	1.0522	0.9423
		10100212	7.4848		1.1588	1.0913	1.2647	1.2261	1.4208
		20100201			1.2100	1.3377	1.6186	1.3959	1.6891
		10100212	27.2490		1.8865	1.0913	2.0587	1.2261	2.3130
		10100212	4.5547		4.0814	1.0913	4.4541	1.2261	5.0041
Total			48.5895		9.9798		11.1451		12.2859
51-041-00003 50249	Kaiser Bellwood Corporation	10300501	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
		39000689	0.0016	1.0000	0.0016	1.0000	0.0016	1.0000	0.0016
		10300603	0.0023	1.0000	0.0023	1.0000	0.0023	1.0000	0.0023
		39000689	0.0059	1.0000	0.0059	1.0000	0.0059	1.0000	0.0059
		39000689	0.0065	1.0000	0.0065	1.0000	0.0065	1.0000	0.0065
		39000689	0.1865	1.0000	0.1865	1.0000	0.1865	1.0000	0.1865
Total			0.2032		0.2032		0.2032		0.2032
51-041-00004 50008	Brown & Williamson Tobacco Corporation Chester	10200602	0.0048	1.0000	0.0048	1.0000	0.0048	1.0000	0.0048
		10200602	0.0093	1.0000	0.0093	1.0000	0.0093	1.0000	0.0093
		10200602	0.0716	1.0000	0.0716	1.0000	0.0716	1.0000	0.0716
Total			0.0857		0.0857		0.0857		0.0857
51-041-00012 50099	Alisco Metals Corporation	39000689	0.0016	1.0000	0.0016	1.0000	0.0016	1.0000	0.0016
		39000689	0.0016	1.0000	0.0016	1.0000	0.0016	1.0000	0.0016
		39000689	0.0039	1.0000	0.0039	1.0000	0.0039	1.0000	0.0039

Table 3.2.2-2

Projected NOx Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)
		39000689	0.0044	1.0000	0.0044	1.0000	0.0044	1.0000	0.0044
		39000689	0.0095	1.0000	0.0095	1.0000	0.0095	1.0000	0.0095
		39000689	0.0109	1.0000	0.0109	1.0000	0.0109	1.0000	0.0109
		39000689	0.0172	1.0000	0.0172	1.0000	0.0172	1.0000	0.0172
		39000689	0.0172	1.0000	0.0172	1.0000	0.0172	1.0000	0.0172
	Total		0.0663		0.0663		0.0663		0.0663
51-041-00015 50127	Defense Supply Center Richmond	10301002	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		10301002	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		10301002	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200301	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200301	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200301	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200301	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		10300503	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		20200301	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		20200301	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		20200301	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		20200301	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		20200301	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		20200301	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		20200301	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		20200301	0.0007	1.0000	0.0007	1.0000	0.0007	1.0000	0.0007
		20200301	0.0009	1.0000	0.0009	1.0000	0.0009	1.0000	0.0009
		20200102	0.0010	1.0000	0.0010	1.0000	0.0010	1.0000	0.0010
		20200102	0.0015	1.0000	0.0015	1.0000	0.0015	1.0000	0.0015
		20200102	0.0015	1.0000	0.0015	1.0000	0.0015	1.0000	0.0015
		10301002	0.0018	1.0000	0.0018	1.0000	0.0018	1.0000	0.0018
		20200102	0.0023	1.0000	0.0023	1.0000	0.0023	1.0000	0.0023
		20200102	0.0023	1.0000	0.0023	1.0000	0.0023	1.0000	0.0023
		20200102	0.0068	1.0000	0.0068	1.0000	0.0068	1.0000	0.0068
		10300503	0.0070	1.0000	0.0070	1.0000	0.0070	1.0000	0.0070
		10300503	0.0070	1.0000	0.0070	1.0000	0.0070	1.0000	0.0070
		20200401	0.0077	1.0000	0.0077	1.0000	0.0077	1.0000	0.0077
		20200401	0.0077	1.0000	0.0077	1.0000	0.0077	1.0000	0.0077
		20200401	0.0086	1.0000	0.0086	1.0000	0.0086	1.0000	0.0086
		20200401	0.0086	1.0000	0.0086	1.0000	0.0086	1.0000	0.0086
		20200301	0.0098	1.0000	0.0098	1.0000	0.0098	1.0000	0.0098
		20200301	0.0098	1.0000	0.0098	1.0000	0.0098	1.0000	0.0098
		20200401	0.0131	1.0000	0.0131	1.0000	0.0131	1.0000	0.0131
		20200401	0.1658	1.0000	0.1658	1.0000	0.1658	1.0000	0.1658

Technical Support Document

Table 3.2.2-2

Projected NOx Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)
		20200401	0.1658	1.0000	0.1658	1.0000	0.1658	1.0000	0.1658
		20200401	0.1658	1.0000	0.1658	1.0000	0.1658	1.0000	0.1658
		20200401	0.1658	1.0000	0.1658	1.0000	0.1658	1.0000	0.1658
Total			0.7652		0.7652		0.7652		0.7652
51-041-00051 50233	Honeywell Nylon Incorporated	10200602	0.0028	1.0000	0.0028	1.0000	0.0028	1.0000	0.0028
		10200502	0.0028	1.0000	0.0028	1.0000	0.0028	1.0000	0.0028
		10200502	0.0065	1.0000	0.0065	1.0000	0.0065	1.0000	0.0065
		10200602	0.0074	1.0000	0.0074	1.0000	0.0074	1.0000	0.0074
		10200501	0.0093	1.0000	0.0093	1.0000	0.0093	1.0000	0.0093
		10200602	0.0151	1.0000	0.0151	1.0000	0.0151	1.0000	0.0151
		10200502	0.0165	1.0000	0.0165	1.0000	0.0165	1.0000	0.0165
		10200502	0.0200	1.0000	0.0200	1.0000	0.0200	1.0000	0.0200
		10200502	0.0203	1.0000	0.0203	1.0000	0.0203	1.0000	0.0203
		10200602	0.0247	1.0000	0.0247	1.0000	0.0247	1.0000	0.0247
		10200602	0.0316	1.0000	0.0316	1.0000	0.0316	1.0000	0.0316
		10200602	0.0324	1.0000	0.0324	1.0000	0.0324	1.0000	0.0324
		10200602	0.0810	1.0000	0.0810	1.0000	0.0810	1.0000	0.0810
Total			0.2703		0.2703		0.2703		0.2703
51-041-00057 50252	Wabash Aluminum Alloys LLC	39000589	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		39000689	0.0006	1.0000	0.0006	1.0000	0.0006	1.0000	0.0006
		39000689	0.0007	1.0000	0.0007	1.0000	0.0007	1.0000	0.0007
		39000589	0.0012	1.0000	0.0012	1.0000	0.0012	1.0000	0.0012
		39000689	0.0065	1.0000	0.0065	1.0000	0.0065	1.0000	0.0065
Total			0.0095		0.0095		0.0095		0.0095
51-041-00058 50260	Reynolds Metals Company Bellwood Printing Plant	39000689	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		39000689	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		39000689	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		39000689	0.0127	1.0000	0.0127	1.0000	0.0127	1.0000	0.0127
Total			0.0128		0.0128		0.0128		0.0128
51-041-00062 50298	VSU	10300602	0.0028	1.0000	0.0028	1.0000	0.0028	1.0000	0.0028
		10300401	0.0152	1.0000	0.0152	1.0000	0.0152	1.0000	0.0152
		10200602	0.0173	1.0000	0.0173	1.0000	0.0173	1.0000	0.0173
		10300208	0.0285	1.0000	0.0285	1.0000	0.0285	1.0000	0.0285
Total			0.0638		0.0638		0.0638		0.0638
51-041-00073 50418	DuPont Teijin Films	10200602	0.0074	1.0000	0.0074	1.0000	0.0074	1.0000	0.0074
51-041-00073 50418	DuPont Teijin Films	10200602	0.0074	1.0000	0.0074	1.0000	0.0074	1.0000	0.0074

Projected NOx Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)
		10200602	0.0233	1.0000	0.0233	1.0000	0.0233	1.0000	0.0233
		10200602	0.0239	1.0000	0.0239	1.0000	0.0239	1.0000	0.0239
		10200602	0.0249	1.0000	0.0249	1.0000	0.0249	1.0000	0.0249
Total			0.0869		0.0869		0.0869		0.0869
51-041-00078 50554	DuPont De Nemours E I & Company Inc James River PI	10200501	0.0026	1.0000	0.0026	1.0000	0.0026	1.0000	0.0026
		30102308	0.0043	1.0404	0.0044	1.1389	0.0049	1.2554	0.0053
Total			0.0068		0.0070		0.0074		0.0079
51-041-00081 50722	Philip Morris USA Inc - Park 500	10200501	0.0012	1.0000	0.0012	1.0000	0.0012	1.0000	0.0012
		10200501	0.0036	1.0000	0.0036	1.0000	0.0036	1.0000	0.0036
		10200501	0.1207	1.0000	0.1207	1.0000	0.1207	1.0000	0.1207
		10200202	1.9270	1.0000	1.9270	1.0000	1.9270	1.0000	1.9270
		10200202	3.8800	1.0000	3.8800	1.0000	3.8800	1.0000	3.8800
Total			5.9325		5.9325		5.9325		5.9325
51-041-00084 50426	Univar USA Incorporated - Chester	10300603	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10300503	0.0010	1.0000	0.0010	1.0000	0.0010	1.0000	0.0010
Total			0.0010		0.0010		0.0010		0.0010
51-041-00090 50752	Shoosmith Brothers Inc	30500201	0.0008	0.9713	0.0008	1.0309	0.0008	1.1363	0.0009
		30500201	0.0017	0.9713	0.0017	1.0309	0.0018	1.1363	0.0019
		50300601	0.0213	1.0852	0.0231	1.2629	0.0269	1.4596	0.0311
		50300601	0.0214	1.0852	0.0232	1.2629	0.0270	1.4596	0.0312
		50300601	0.0214	1.0852	0.0232	1.2629	0.0270	1.4596	0.0312
Total			0.0666		0.0720		0.0835		0.0964
51-041-00110 50906	Super Radiator Coils	10200603	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
Total			0.0002		0.0002		0.0002		0.0002
51-041-00114 50831	Honeywell International Inc- Technical Center	20300101	0.0233	1.0000	0.0233	1.0000	0.0233	1.0000	0.0233
Total			0.0233		0.0233		0.0233		0.0233
51-041-00122 50984	Maruchan Virginia Inc	10200603	0.0216	1.0000	0.0216	1.0000	0.0216	1.0000	0.0216
		10200603	0.0269	1.0000	0.0269	1.0000	0.0269	1.0000	0.0269
Total			0.0484		0.0484		0.0484		0.0484
51-041-00133 50766	The Hon Company	39000689	0.0204	1.0000	0.0204	1.0000	0.0204	1.0000	0.0204
Total			0.0204		0.0204		0.0204		0.0204
51-041-00181 51289	APAC - Virginia, Inc. (Chesterfield Plant)	30500208	0.0014	1.0000	0.0014	1.0000	0.0014	1.0000	0.0014

Table 3.2.2-2

Projected NOx Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)
		30500208	0.0034	1.0000	0.0034	1.0000	0.0034	1.0000	0.0034
		10300501	0.0279	1.0000	0.0279	1.0000	0.0279	1.0000	0.0279
Total			0.0327		0.0327		0.0327		0.0327
51-041-00184 51294	Rehrig International Inc	10300603	0.0031	1.0000	0.0031	1.0000	0.0031	1.0000	0.0031
		10300602	0.0038	1.0000	0.0038	1.0000	0.0038	1.0000	0.0038
Total			0.0069		0.0069		0.0069		0.0069
51-085-00001 50105	Flippo Lumber Corp	10200906	0.1058	1.0000	0.1058	1.0000	0.1058	1.0000	0.1058
Total			0.1058		0.1058		0.1058		0.1058
Hanover Jurisdiction									
51-085-00004 50055	Tyson Foods Inc	10200602	0.0045	1.0000	0.0045	1.0000	0.0045	1.0000	0.0045
		10200602	0.0052	1.0000	0.0052	1.0000	0.0052	1.0000	0.0052
		10200602	0.0053	1.0000	0.0053	1.0000	0.0053	1.0000	0.0053
		10200602	0.0053	1.0000	0.0053	1.0000	0.0053	1.0000	0.0053
		20100102	0.0991	0.7725	0.0765	0.8049	0.0797	0.8128	0.0805
		20100102	0.1042	0.7725	0.0805	0.8049	0.0839	0.8128	0.0847
		20100102	0.1074	0.7725	0.0830	0.8049	0.0864	0.8128	0.0873
		20100102	0.1373	0.7725	0.1061	0.8049	0.1105	0.8128	0.1116
Total			0.4683		0.3664		0.3809		0.3844
51-085-00010 50217	US Silica Company Montpelier Operation	10300504	0.0071	1.0000	0.0071	1.0000	0.0071	1.0000	0.0071
		10300504	0.0167	1.0000	0.0167	1.0000	0.0167	1.0000	0.0167
Total			0.0238		0.0238		0.0238		0.0238
51-085-00042 50840	Bear Island Paper Company LLC	10200601	0.0015	1.0000	0.0015	1.0000	0.0015	1.0000	0.0015
		10200601	0.0025	1.0000	0.0025	1.0000	0.0025	1.0000	0.0025
		10200202	0.3595	1.0000	0.3595	1.0000	0.3595	1.0000	0.3595
		10200901	0.3627	1.0000	0.3627	1.0000	0.3627	1.0000	0.3627
Total			0.7261		0.7261		0.7261		0.7261
51-085-00061 51018	Doswell Limited Partnership	10100501							
		10100601	0.091409		0.259295	1.337676	0.346853	1.395949	0.36196 3
		20100101	0.000642						
		20100201	0.359686						
		10100501							
		10100601	0.086738		0.284644	1.337676	0.380762	1.395949	0.39734 9
		20100101	0.002194						
		20100201	0.341591						

Table 3.2.2-2

Projected NOx Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018		
			NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	
51-085-00061 51018	Doswell Limited Partnership	10100501								
		10100601	0.100609		0.243531	1.337676	0.325766	1.395949	0.339957	
		20100101	0.000209							
		20100201	0.384137							
		10200501								
		10100601	0.104275		0.209813	1.337676	0.280661	1.395949	0.292888	
		20100101	0.000012							
		20100201	0.394253							
		10200602	0.017472	1	0.017472	1	0.017472	1	0.017472	
		20300101	0.001738	1	0.001738	1	0.001738	1	0.001738	
		20300101	0.009383	1	0.009383	1	0.009383	1	0.009383	
		20100101	0.006	0.772472	0.004634	0.804918	0.004829	0.812774	0.004876	
		20100201	0.726113	1.288614	0.935679	1.723748	1.251636	1.79884	1.306161	
Total			2.6265		1.9662		2.6191		2.7318	
51-085-00069 51064	Richmond Newspapers Incorporated - Hanover	20200104	1.3810	1.0000	1.3810	1.0000	1.3810	1.0000	1.3810	
Total			1.3810		1.3810		1.3810		1.3810	
51-085-00084 51293	Interflex Group Inc - Virginia Plant	10300603	0.0037	1.0000	0.0037	1.0000	0.0037	1.0000	0.0037	
Total			0.0037		0.0037		0.0037		0.0037	
51-085-51048 51048	Purgo Inc	39000599	0.0103	1.0000	0.0103	1.0000	0.0103	1.0000	0.0103	
		39000499	0.0231	1.0000	0.0231	1.0000	0.0231	1.0000	0.0231	
Total			0.0335		0.0335		0.0335		0.0335	
Henrico Jurisdiction										
51-087-00004 50040	Branscome Inc - Richmond Asphalt	30500208	0.0023	1.0000	0.0023	1.0000	0.0023	1.0000	0.0023	
		30500208	0.0067	1.0000	0.0067	1.0000	0.0067	1.0000	0.0067	
		30500201	0.0235	0.9713	0.0229	1.0309	0.0243	1.1363	0.0268	
Total			0.0325		0.0318		0.0332		0.0357	
51-087-00027 50358	CadmusMack Byrd Press Division	10200603	0.0148	1.0000	0.0148	1.0000	0.0148	1.0000	0.0148	
Total			0.0148		0.0148		0.0148		0.0148	
51-087-00030 50375	Stone Container Corporation Lewis Rd	10200602	0.0076	1.0000	0.0076	1.0000	0.0076	1.0000	0.0076	

Projected NOx Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)
		10200602	0.0076	1.0000	0.0076	1.0000	0.0076	1.0000	0.0076
51-087-00030 50375	Stone Container Corporation Lewis Rd	10200504	0.0153	1.0000	0.0153	1.0000	0.0153	1.0000	0.0153
		10200504	0.0153	1.0000	0.0153	1.0000	0.0153	1.0000	0.0153
			0.0459		0.0459		0.0459		0.0459
51-087-00083 50703	Kraft Foods Global- Richmond Bakery	10500206	0.0070	1.0000	0.0070	1.0000	0.0070	1.0000	0.0070
		39000689	0.0104	1.0000	0.0104	1.0000	0.0104	1.0000	0.0104
		30290003	0.0114	1.0000	0.0114	1.0000	0.0114	1.0000	0.0114
		10500206	0.0117	1.0000	0.0117	1.0000	0.0117	1.0000	0.0117
		39000689	0.0141	1.0000	0.0141	1.0000	0.0141	1.0000	0.0141
		39000689	0.0145	1.0000	0.0145	1.0000	0.0145	1.0000	0.0145
		10200603	0.0173	1.0000	0.0173	1.0000	0.0173	1.0000	0.0173
		10200602	0.0176	1.0000	0.0176	1.0000	0.0176	1.0000	0.0176
		10500206	0.0199	1.0000	0.0199	1.0000	0.0199	1.0000	0.0199
		39000689	0.0601	1.0000	0.0601	1.0000	0.0601	1.0000	0.0601
51-087-00100 50773	St Josephs Home		0.1842		0.1842		0.1842		0.1842
		10200501	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10300602	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		10300602	0.0012	1.0000	0.0012	1.0000	0.0012	1.0000	0.0012
		39999992	0.0306	1.1585	0.0355	1.4790	0.0453	1.8064	0.0553
51-087-00130 50880	Quebecor Printing Richmond Incorporated		0.0320		0.0368		0.0467		0.0567
		10200602	0.0397	1.0000	0.0397	1.0000	0.0397	1.0000	0.0397
			0.0397		0.0397		0.0397		0.0397
51-087-00144 50949	Graphic Packaging International, Inc.	10300603	0.0068	1.0000	0.0068	1.0000	0.0068	1.0000	0.0068
51-087-00156 50997	Dominion - Darbytown		0.0068		0.0068		0.0068		0.0068
		20200101	0.0209		0.6990	1.0000	0.6990	1.0000	0.6990
		20200201	0.1189		0.7465	1.0000	0.7465	1.0000	0.7465
51-087-00161 51036	Johns Manville Corporation		0.1399		1.4454		1.4454		1.4454
		10300501	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		30500202	0.0002	0.9713	0.0002	1.0309	0.0002	1.1363	0.0002
51-087-00168 51069	BFI Waste Systems/Gas Recovery Systems	10300603	0.0030	1.0000	0.0030	1.0000	0.0030	1.0000	0.0030
			0.0032		0.0032		0.0032		0.0032
		50200601	0.0012	1.0654	0.0013	1.1836	0.0015	1.3151	0.0016
		20100802	0.0406	1.0024	0.0407	1.0032	0.0407	1.0036	0.0408

Technical Support Document

Projected NOx Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)
Total			0.0419		0.0420		0.0422		0.0424
51-087-00209 51227	BFI Old Dominion Landfill	50200601	0.0236	1.0654	0.0252	1.1836	0.0280	1.3151	0.0311
Total			0.0236		0.0252		0.0280		0.0311
51-087-00210 51232	Infineon Technologies Richmond	10200501	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10200501	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		39990014	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10200501	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10200501	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10200602	0.0014	1.0000	0.0014	1.0000	0.0014	1.0000	0.0014
		10200602	0.0025	1.0000	0.0025	1.0000	0.0025	1.0000	0.0025
		10200602	0.0038	1.0000	0.0038	1.0000	0.0038	1.0000	0.0038
		10200602	0.0046	1.0000	0.0046	1.0000	0.0046	1.0000	0.0046
		10200602	0.0051	1.0000	0.0051	1.0000	0.0051	1.0000	0.0051
		20100102	0.0092	0.7725	0.0071	0.8049	0.0074	0.8128	0.0075
Total			0.0267		0.0246		0.0249		0.0250
51-087-00217 51286	Henrico County DPU Springfield Road Landfill	50280001	0.0009	1.0654	0.0010	1.1836	0.0011	1.3151	0.0012
Total			0.0009		0.0010		0.0011		0.0012
51-087-50039 50039	Blakemore Construction Corp Portugee Rd	30500201	0.0004	0.9713	0.0004	1.0309	0.0005	1.1363	0.0005
		30500208	0.0012	1.0000	0.0012	1.0000	0.0012	1.0000	0.0012
		30500201	0.0047	0.9713	0.0045	1.0309	0.0048	1.1363	0.0053
		30500208	0.0176	1.0000	0.0176	1.0000	0.0176	1.0000	0.0176
Total			0.0239		0.0238		0.0241		0.0246
Prince George Jurisdiction									
51-149-00007 50564	US Army Fort Lee	20200102	0.0009	1.0000	0.0009	1.0000	0.0009	1.0000	0.0009
		20200102	0.0012	1.0000	0.0012	1.0000	0.0012	1.0000	0.0012
		10300603	0.0029	1.0000	0.0029	1.0000	0.0029	1.0000	0.0029
		10300603	0.0038	1.0000	0.0038	1.0000	0.0038	1.0000	0.0038
		20200102	0.0053	1.0000	0.0053	1.0000	0.0053	1.0000	0.0053
		20200102	0.0059	1.0000	0.0059	1.0000	0.0059	1.0000	0.0059
		20200102	0.0092	1.0000	0.0092	1.0000	0.0092	1.0000	0.0092
		20200102	0.0175	1.0000	0.0175	1.0000	0.0175	1.0000	0.0175
		10300603	0.0360	1.0000	0.0360	1.0000	0.0360	1.0000	0.0360
Total			0.0826		0.0826		0.0826		0.0826

Table 3.2.2-2

Projected NOx Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018		
			NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	
51-149-00062 51009	Columbia Gas Transmission Corp- Prince Georg	10200603	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002	
		20200403	0.0363	1.0000	0.0363	1.0000	0.0363	1.0000	0.0363	
		20200403	0.0440	1.0000	0.0440	1.0000	0.0440	1.0000	0.0440	
		20200403	0.0584	1.0000	0.0584	1.0000	0.0584	1.0000	0.0584	
		20200403	0.2800	1.0000	0.2800	1.0000	0.2800	1.0000	0.2800	
		20200403	0.2961	1.0000	0.2961	1.0000	0.2961	1.0000	0.2961	
		20200403	0.3804	1.0000	0.3804	1.0000	0.3804	1.0000	0.3804	
Total			1.0954		1.0954		1.0954		1.0954	
Colonial Heights Jurisdiction										
51-570-00105 50833	Roslyn Converters Inc	39000689	0.0035	1.0000	0.0035	1.0000	0.0035	1.0000	0.0035	
Total			0.0035		0.0035		0.0035		0.0035	
Hopewell Jurisdiction										
51-670-00003 50370	Stone Container Corporation Hopewell	30700122	0.0046	1.0731	0.0050	1.1817	0.0055	1.3025	0.0060	
		30700105	0.0227	1.1006	0.0250	1.2778	0.0290	1.4808	0.0336	
		30700106	0.4627	1.1006	0.5092	1.2778	0.5912	1.4808	0.6851	
		30700110	1.0820	1.1006	1.1909	1.2778	1.3826	1.4808	1.6022	
		10200202	1.5280	1.0000	1.5280	1.0000	1.5280	1.0000	1.5280	
		10200901	1.6950	1.0000	1.6950	1.0000	1.6950	1.0000	1.6950	
Total			4.7950		4.9530		5.2313		5.5500	
51-670-00026 50232	Honeywell Nylon Inc- Hopewell	10200603	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000	
		30100105	0.0001	1.0404	0.0001	1.1389	0.0001	1.2554	0.0001	
		30100199	0.0003	1.0404	0.0003	1.1389	0.0003	1.2554	0.0003	
		30100199	0.0016	1.0404	0.0017	1.1389	0.0019	1.2554	0.0021	
		10200603	0.0032	1.0000	0.0032	1.0000	0.0032	1.0000	0.0032	
		10300603	0.0032	1.0000	0.0032	1.0000	0.0032	1.0000	0.0032	
		39990013	0.0033	1.0000	0.0033	1.0000	0.0033	1.0000	0.0033	
		10200603	0.0037	1.0000	0.0037	1.0000	0.0037	1.0000	0.0037	
		10200602	0.0051	1.0000	0.0051	1.0000	0.0051	1.0000	0.0051	
		10200602	0.0051	1.0000	0.0051	1.0000	0.0051	1.0000	0.0051	
		10300602	0.0052	1.0000	0.0052	1.0000	0.0052	1.0000	0.0052	
		49090023	0.0074	1.0000	0.0074	1.0000	0.0074	1.0000	0.0074	
		20300101	0.0219	1.0000	0.0219	1.0000	0.0219	1.0000	0.0219	
		10201301	0.0426	1.0000	0.0426	1.0000	0.0426	1.0000	0.0426	
		30199999	0.0615	1.0484	0.0645	1.1506	0.0708	1.2682	0.0780	
		10200601	0.1522	1.0000	0.1522	1.0000	0.1522	1.0000	0.1522	
		10200602	0.1647	1.0000	0.1647	1.0000	0.1647	1.0000	0.1647	

Projected NOx Point Source Emissions for the Richmond-Petersburg Non-Attainment Area											
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018			
			NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)		
		10200401	0.5635	1.0000	0.5635	1.0000	0.5635	1.0000	0.5635		
		30199999	0.8132	1.0484	0.8525	1.1506	0.9356	1.2682	1.0313		
		30199999	1.0150	1.0484	1.0641	1.1506	1.1678	1.2682	1.2872		
		30199999	1.3150	1.0484	1.3786	1.1506	1.5130	1.2682	1.6677		
51-670-00026 50232	Honeywell Nylon Inc- Hopewell	10200601	1.4840	1.0000	1.4840	1.0000	1.4840	1.0000	1.4840		
		30199999	1.5580	1.0484	1.6334	1.1506	1.7926	1.2682	1.9758		
		30199999	1.5630	1.0484	1.6386	1.1506	1.7984	1.2682	1.9822		
		30199999	2.8380	1.0484	2.9753	1.1506	3.2654	1.2682	3.5991		
		30199999	2.8960	1.0484	3.0361	1.1506	3.3321	1.2682	3.6727		
		30199999	2.9250	1.0484	3.0665	1.1506	3.3655	1.2682	3.7095		
		30199999	3.4970	1.0484	3.6661	1.1506	4.0236	1.2682	4.4349		
		30199999	3.5050	1.0484	3.6745	1.1506	4.0328	1.2682	4.4450		
		Total		24.4538	25.5174		27.7649		30.3510		
51-670-00053 50735	Hopewell WWTP	50290006	0.0043	1.0000	0.0043	1.0000	0.0043	1.0000	0.0043		
		50200506	0.0471	1.0654	0.0502	1.1836	0.0558	1.3151	0.0620		
Total				0.0514	0.0545		0.0601		0.0663		
51-670-00054 50891	Goldschmidt Chemical Corp	10300603	0.0006	1.0000	0.0006	1.0000	0.0006	1.0000	0.0006		
		10300603	0.0009	1.0000	0.0009	1.0000	0.0009	1.0000	0.0009		
		10300603	0.0011	1.0000	0.0011	1.0000	0.0011	1.0000	0.0011		
		10300603	0.0011	1.0000	0.0011	1.0000	0.0011	1.0000	0.0011		
		10300603	0.0012	1.0000	0.0012	1.0000	0.0012	1.0000	0.0012		
		Total		0.0047	0.0047		0.0047		0.0047		
51-670-00055 50950	James River Cogeneration Company	10100204	2.4220		2.2623	1.0913	2.4689	1.2261	2.7738		
		10100204	2.4520		2.3638	1.0913	2.5797	1.2261	2.8982		
Total				4.8740	4.6261		5.0486		5.6720		
51-670-00058 50967	Hopewell Cogeneration Ltd Partnership	10200505	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000		
		10200604	0.0161	1.0000	0.0161	1.0000	0.0161	1.0000	0.0161		
		10200604	0.0310	1.0000	0.0310	1.0000	0.0310	1.0000	0.0310		
		20100101	0.6865	0.7725	0.5303	0.8049	0.5526	0.8128	0.5580		
		20100101	0.7331	0.7725	0.5663	0.8049	0.5901	0.8128	0.5958		
		20100101	0.7797	0.7725	0.6023	0.8049	0.6276	0.8128	0.6337		
		20100201	2.7410		0.6908	1.3377	0.9240	1.3959	0.9643		
		20100201	2.6240		0.7452	1.3377	0.9969	1.3959	1.0403		
		20100201	2.6610		0.8225	1.3377	1.1002	1.3959	1.1482		
Total				10.2725		4.0046		4.8386		4.9875	
Petersburg Jurisdiction											

Projected NOx Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)
51-730-00001 50052	Southside Virginia Training Center	20300101	0.0248	1.0000	0.0248	1.0000	0.0248	1.0000	0.0248
		10300209	0.0343	1.0000	0.0343	1.0000	0.0343	1.0000	0.0343
		10300209	0.0370	1.0000	0.0370	1.0000	0.0370	1.0000	0.0370
		10300209	0.0467	1.0000	0.0467	1.0000	0.0467	1.0000	0.0467
Total			0.1428		0.1428		0.1428		0.1428
51-730-00048 50292	Brenco Inc	10200602	0.0288	1.0000	0.0288	1.0000	0.0288	1.0000	0.0288
Total			0.0288		0.0288		0.0288		0.0288
Richmond City Jurisdiction									
51-760-00002 50534	Reynolds Metals Company Richmond Foil Plant	10300603	0.0012	1.0000	0.0012	1.0000	0.0012	1.0000	0.0012
		39000689	0.0140	1.0000	0.0140	1.0000	0.0140	1.0000	0.0140
		39000689	0.0392	1.0000	0.0392	1.0000	0.0392	1.0000	0.0392
Total			0.0544		0.0544		0.0544		0.0544
51-760-00003 50531	Sampson Coatings Inc Hull St Office	10200603	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10200504	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
Total			0.0005		0.0005		0.0005		0.0005
51-760-00004 50356	Sonoco Products Co	10200601	0.0224	1.0000	0.0224	1.0000	0.0224	1.0000	0.0224
		10200601	0.0365	1.0000	0.0365	1.0000	0.0365	1.0000	0.0365
Total			0.0589		0.0589		0.0589		0.0589
51-760-00009 50082	Philip Morris USA Inc Leaf Processing Facility	39999992	0.0001	1.1585	0.0001	1.4790	0.0001	1.8064	0.0002
		10200504	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		10200504	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		39999992	0.0002	1.1585	0.0002	1.4790	0.0003	1.8064	0.0003
		10200602	0.0241	1.0000	0.0241	1.0000	0.0241	1.0000	0.0241
		10200602	0.0341	1.0000	0.0341	1.0000	0.0341	1.0000	0.0341
		10200602	0.0465	1.0000	0.0465	1.0000	0.0465	1.0000	0.0465
Total			0.1053		0.1054		0.1055		0.1056
51-760-00012 50355	Richmond Paperboard	10200602	0.0051	1.0000	0.0051	1.0000	0.0051	1.0000	0.0051
		10200401	0.1762	1.0000	0.1762	1.0000	0.1762	1.0000	0.1762
Total			0.1813		0.1813		0.1813		0.1813
51-760-00013 50126	VCU East Plant	10200401	0.0011	1.0000	0.0011	1.0000	0.0011	1.0000	0.0011
		10200401	0.0043	1.0000	0.0043	1.0000	0.0043	1.0000	0.0043
		10200401	0.0059	1.0000	0.0059	1.0000	0.0059	1.0000	0.0059
		10200601	0.0108	1.0000	0.0108	1.0000	0.0108	1.0000	0.0108
		10200601	0.0141	1.0000	0.0141	1.0000	0.0141	1.0000	0.0141

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Table 3.2.2-2

Projected NOx Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)
		10200601	0.0172	1.0000	0.0172	1.0000	0.0172	1.0000	0.0172
	Total		0.0535		0.0535		0.0535		0.0535
51-760-00037 50043	APAC-Virginia Inc Rchmd Plt #412	30500208	0.0006	1.0000	0.0006	1.0000	0.0006	1.0000	0.0006
		30500207	0.0027	1.0000	0.0027	1.0000	0.0027	1.0000	0.0027
		30500206	0.0074	1.0000	0.0074	1.0000	0.0074	1.0000	0.0074
		30500201	0.0112	0.9713	0.0109	1.0309	0.0116	1.1363	0.0128
	Total		0.0219		0.0216		0.0223		0.0234
51-760-00038 50046	Interstate Construction Corp	30500252	0.0674	0.9713	0.0654	1.0309	0.0694	1.1363	0.0765
	Total		0.0674		0.0654		0.0694		0.0765
51-760-00052 50080	Philip Morris USA Inc - Blended Leaf (BL) Plant	30203399	0.0116	0.9217	0.0107	0.9676	0.0112	1.0666	0.0124
		30203399	0.0121	0.9217	0.0112	0.9676	0.0117	1.0666	0.0129
		30203399	0.0125	0.9217	0.0115	0.9676	0.0121	1.0666	0.0134
		30203399	0.0256	0.9217	0.0236	0.9676	0.0248	1.0666	0.0273
		30203399	0.0446	0.9217	0.0411	0.9676	0.0431	1.0666	0.0475
		30203399	0.0581	0.9217	0.0535	0.9676	0.0562	1.0666	0.0619
	Total		0.1645		0.1516		0.1592		0.1755
51-760-00056 50085	Packaging Corporation of America	10200602	0.0080	1.0000	0.0080	1.0000	0.0080	1.0000	0.0080
	Total		0.0080		0.0080		0.0080		0.0080
51-760-00063 50110	TCS Materials - Deepwater Terminal Rd	10300501	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
	Total		0.0005		0.0005		0.0005		0.0005
51-760-00072 50143	Carter Printing	10300501	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
	Total		0.0004		0.0004		0.0004		0.0004
51-760-00084 50199	Interbake Foods Inc	10200603	0.0143	1.0000	0.0143	1.0000	0.0143	1.0000	0.0143
	Total		0.0143		0.0143		0.0143		0.0143
51-760-00087 50209	University of Richmond	10300602	0.0041	1.0000	0.0041	1.0000	0.0041	1.0000	0.0041
		10300208	0.0049	1.0000	0.0049	1.0000	0.0049	1.0000	0.0049
		10300602	0.0060	1.0000	0.0060	1.0000	0.0060	1.0000	0.0060
		10300208	0.0239	1.0000	0.0239	1.0000	0.0239	1.0000	0.0239
		10300208	0.0386	1.0000	0.0386	1.0000	0.0386	1.0000	0.0386
		10300208	0.0485	1.0000	0.0485	1.0000	0.0485	1.0000	0.0485
		20100202	0.2309	1.2886	0.2975	1.7237	0.3980	1.7988	0.4153
	Total		0.3569		0.4235		0.5240		0.5413

Table 3.2.2-2

Projected NOx Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)
51-760-00093 50224	Fergusson, J W and Sons, Inc.	39000689	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		10200602	0.0015	1.0000	0.0015	1.0000	0.0015	1.0000	0.0015
		10200602	0.0015	1.0000	0.0015	1.0000	0.0015	1.0000	0.0015
		39000689	0.0018	1.0000	0.0018	1.0000	0.0018	1.0000	0.0018
			0.0051		0.0051		0.0051		0.0051
51-760-00122 50314	Altadis USA	10200501	0.0012	1.0000	0.0012	1.0000	0.0012	1.0000	0.0012
		10200602	0.0032	1.0000	0.0032	1.0000	0.0032	1.0000	0.0032
Total			0.0044		0.0044		0.0044		0.0044
51-760-00123 50334	Citgo Petroleum Corporation	40600141	0.0087	1.0129	0.0088	1.0447	0.0091	1.0792	0.0094
Total			0.0087		0.0088		0.0091		0.0094
51-760-00129 50344	Mead Westvaco Corporation Headquarters	39999992	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000
		39999992	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000
		10200603	0.0009	1.0000	0.0009	1.0000	0.0009	1.0000	0.0009
		39000689	0.0012	1.0000	0.0012	1.0000	0.0012	1.0000	0.0012
		10200602	0.0034	1.0000	0.0034	1.0000	0.0034	1.0000	0.0034
		10200501	0.0074	1.0000	0.0074	1.0000	0.0074	1.0000	0.0074
			0.0130		0.0130		0.0130		0.0130
51-760-00246 50528	Carpenter Company, Richmond Plant	10201701	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		10200603	0.0060	1.0000	0.0060	1.0000	0.0060	1.0000	0.0060
Total			0.0063		0.0063		0.0063		0.0063
51-760-00247 50533	Flint Hills Resources LP	10200602	0.0008	1.0000	0.0008	1.0000	0.0008	1.0000	0.0008
		10200501	0.0063	1.0000	0.0063	1.0000	0.0063	1.0000	0.0063
Total			0.0070		0.0070		0.0070		0.0070
51-760-00264 50591	US Courthouse	10300603	0.0469	1.0000	0.0469	1.0000	0.0469	1.0000	0.0469
Total			0.0469		0.0469		0.0469		0.0469
51-760-00308 50076	Philip Morris USA Manufacturing Center	39999992	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000
		39999992	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000
		39999992	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000
		39999992	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000
		10200501	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		10300603	0.0024	1.0000	0.0024	1.0000	0.0024	1.0000	0.0024
		10300603	0.0024	1.0000	0.0024	1.0000	0.0024	1.0000	0.0024
		39990013	0.0043	1.0000	0.0043	1.0000	0.0043	1.0000	0.0043
		39990013	0.0043	1.0000	0.0043	1.0000	0.0043	1.0000	0.0043

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Projected NOx Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)
		10200601	0.0107	1.0000	0.0107	1.0000	0.0107	1.0000	0.0107
		10200601	0.0107	1.0000	0.0107	1.0000	0.0107	1.0000	0.0107
		10200202	0.9554	1.0000	0.9554	1.0000	0.9554	1.0000	0.9554
Total			0.9906		0.9906		0.9906		0.9906
51-760-00328 50769	Virginia Union University	10300602	0.0128	1.0000	0.0128	1.0000	0.0128	1.0000	0.0128
		10300602	0.0132	1.0000	0.0132	1.0000	0.0132	1.0000	0.0132
		10300602	0.0148	1.0000	0.0148	1.0000	0.0148	1.0000	0.0148
		10300602	0.0195	1.0000	0.0195	1.0000	0.0195	1.0000	0.0195
		10300602	0.0234	1.0000	0.0234	1.0000	0.0234	1.0000	0.0234
		10300602	0.0275	1.0000	0.0275	1.0000	0.0275	1.0000	0.0275
		10300602	0.0305	1.0000	0.0305	1.0000	0.0305	1.0000	0.0305
		10300602	0.0308	1.0000	0.0308	1.0000	0.0308	1.0000	0.0308
		10300602	0.0411	1.0000	0.0411	1.0000	0.0411	1.0000	0.0411
		10300602	0.0432	1.0000	0.0432	1.0000	0.0432	1.0000	0.0432
		10300602	0.1075	1.0000	0.1075	1.0000	0.1075	1.0000	0.1075
Total			0.3643		0.3643		0.3643		0.3643
51-760-00375 50923	Richmond Barrel & Box Co Inc	10200603	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		10200603	0.0018	1.0000	0.0018	1.0000	0.0018	1.0000	0.0018
Total			0.0020		0.0020		0.0020		0.0020
51-760-00389 50988	Dominion - Bellemeade	20300101	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
			0.2445		0.2596	1.2357	0.3208	1.2773	0.3316
			0.2512		0.2990	1.3168	0.3937	1.3716	0.4101
Total			0.4959		0.5588		0.7147		0.7419
51-760-00399 51033	Cogentrix of Richmond	10101201	0.0296	1.0391	0.0308	1.1216	0.0332	1.1806	0.0350
		10101201	0.0304	1.0391	0.0315	1.1216	0.0340	1.1806	0.0358
		10100204	1.7960		1.1227	1.0913	1.2252	1.2261	1.3765
		10100204	2.0770		2.3106	1.0913	2.5216	1.2261	2.8330
		10100204	2.1140		2.3424	1.0913	2.5563	1.2261	2.8719
		10100204	1.6850		2.4384	1.0913	2.6611	1.2261	2.9897
Total			7.7320		8.2764		9.0314		10.1419
51-760-00400 51034	Kinder Morgan Operating LP "A"- Deepwater Terminal	10200603	0.0177	1.0000	0.0177	1.0000	0.0177	1.0000	0.0177
Total			0.0177		0.0177		0.0177		0.0177
51-760-00405 51055	Wythe Park Power Inc Richmond Plant	20100201	0.2050	1.2886	0.2641	1.7237	0.3533	1.7988	0.3687
		20100201	0.5506	1.2886	0.7096	1.7237	0.9492	1.7988	0.9905
Total			0.7556		0.9737		1.3025		1.3592

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Table 3.2.2-2									
Projected NOx Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)	Growth Factor	NOx (tpd)
51-760-00410 51075	Ethyl Corp	10200602	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		20400401	0.0002	0.9260	0.0002	1.1148	0.0002	1.3616	0.0003
		20300101	0.0012	1.0000	0.0012	1.0000	0.0012	1.0000	0.0012
		20400402	0.0072	0.9260	0.0067	1.1148	0.0081	1.3616	0.0099
		20400401	0.0074	0.9260	0.0068	1.1148	0.0082	1.3616	0.0100
		10200602	0.0126	1.0000	0.0126	1.0000	0.0126	1.0000	0.0126
		20400402	0.0161	0.9260	0.0149	1.1148	0.0180	1.3616	0.0220
Total			0.0449		0.0426		0.0484		0.0561
51-760-00468 51894	Blue Ridge Paper Products DairyPak Paperboard	10200603	0.0013	1.0000	0.0013	1.0000	0.0013	1.0000	0.0013
Total			0.0013		0.0013		0.0013		0.0013
Non-Attainment Area Total			119.750		77.281		84.296		90.521

Table 3.2.2-3									
Projected CO Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)
Charles City Jurisdiction									
51-036-00014 51254	Charles City County Landfill	50100410	0.0268	1.0579	0.0283	1.1891	0.0318	1.3358	0.0358
		50100410	0.1104	1.0579	0.1168	1.1891	0.1313	1.3358	0.1475
	Total		0.1372		0.1451		0.1631		0.1832
Chesterfield Jurisdiction									
51-041-00001 50397	E I du Pont de Nemours and Co-Spruance Plt	10300602	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		10300602	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		39990023	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		10300602	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
		10200602	0.0052	1.0000	0.0052	1.0000	0.0052	1.0000	0.0052
		Total	0.0069		0.0069		0.0069		0.0069
51-041-00002 50396	Dominion - Chesterfield Power Station	20100102	0.0000	0.7725	0.0000	0.8049	0.0000	0.8128	0.0000
		20100109	0.0000	0.7725	0.0000	0.8049	0.0000	0.8128	0.0000
		10101302	0.0001	0.5045	0.0001	0.4466	0.0000	0.3035	0.0000
		10100501	0.0013	0.7725	0.0010	0.8049	0.0011	0.8128	0.0011
		10100501	0.0015	0.7725	0.0012	0.8049	0.0012	0.8128	0.0012
		10100501	0.0034	0.7725	0.0026	0.8049	0.0027	0.8128	0.0028
		10100501	0.0044	0.7725	0.0034	0.8049	0.0035	0.8128	0.0035
		20100201	0.0386	1.2886	0.0497	1.7237	0.0665	1.7988	0.0694
		10100212	0.0946	0.9744	0.0922	1.0634	0.1006	1.1947	0.1130
		10100212	0.2845	0.9744	0.2772	1.0634	0.3025	1.1947	0.3399
		10100212	0.8152	0.9744	0.7943	1.0634	0.8668	1.1947	0.9739
		10100212	1.3310	0.9744	1.2969	1.0634	1.4153	1.1947	1.5901
		Total	2.5746		2.5186		2.7604		3.0949
51-041-00003 50249	Kaiser Bellwood Corporation	10300501	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		39000689	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		39000689	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
		10300603	0.0012	1.0000	0.0012	1.0000	0.0012	1.0000	0.0012
		39000689	0.0015	1.0000	0.0015	1.0000	0.0015	1.0000	0.0015
		39000689	0.0016	1.0000	0.0016	1.0000	0.0016	1.0000	0.0016
		Total	0.0052		0.0052		0.0052		0.0052
51-041-00004 50008	Brown & Williamson Tobacco Corporation Chester	10200602	0.0070	1.0000	0.0070	1.0000	0.0070	1.0000	0.0070
		10200602	0.0139	1.0000	0.0139	1.0000	0.0139	1.0000	0.0139
		10200602	0.1074	1.0000	0.1074	1.0000	0.1074	1.0000	0.1074

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Table 3.2.2-3

Projected CO Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)
	Total		0.1284		0.1284		0.1284		0.1284
51-041-00012 50099	AlSCO Metals Corporation	39000689	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		39000689	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		39000689	0.0010	1.0000	0.0010	1.0000	0.0010	1.0000	0.0010
		39000689	0.0015	1.0000	0.0015	1.0000	0.0015	1.0000	0.0015
		39000689	0.0033	1.0000	0.0033	1.0000	0.0033	1.0000	0.0033
		39000689	0.0038	1.0000	0.0038	1.0000	0.0038	1.0000	0.0038
		39000689	0.0060	1.0000	0.0060	1.0000	0.0060	1.0000	0.0060
		39000689	0.0060	1.0000	0.0060	1.0000	0.0060	1.0000	0.0060
	Total		0.0224		0.0224		0.0224		0.0224
51-041-00015 50127	Defense Supply Center Richmond	10301002	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10301002	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10301002	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10300503	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		20200102	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		10301002	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200102	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		20200102	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		20200102	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
		20200102	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
		20200102	0.0015	1.0000	0.0015	1.0000	0.0015	1.0000	0.0015
		10300503	0.0017	1.0000	0.0017	1.0000	0.0017	1.0000	0.0017
		10300503	0.0017	1.0000	0.0017	1.0000	0.0017	1.0000	0.0017
		20200401	0.0020	1.0000	0.0020	1.0000	0.0020	1.0000	0.0020
		20200401	0.0020	1.0000	0.0020	1.0000	0.0020	1.0000	0.0020
		20200401	0.0023	1.0000	0.0023	1.0000	0.0023	1.0000	0.0023
		20200401	0.0023	1.0000	0.0023	1.0000	0.0023	1.0000	0.0023
		20200401	0.0035	1.0000	0.0035	1.0000	0.0035	1.0000	0.0035
		20200301	0.0091	1.0000	0.0091	1.0000	0.0091	1.0000	0.0091
		20200301	0.0091	1.0000	0.0091	1.0000	0.0091	1.0000	0.0091
		20200301	0.0091	1.0000	0.0091	1.0000	0.0091	1.0000	0.0091
		20200301	0.0099	1.0000	0.0099	1.0000	0.0099	1.0000	0.0099
		20200301	0.0132	1.0000	0.0132	1.0000	0.0132	1.0000	0.0132
		20200301	0.0132	1.0000	0.0132	1.0000	0.0132	1.0000	0.0132
		20200301	0.0132	1.0000	0.0132	1.0000	0.0132	1.0000	0.0132
		20200301	0.0132	1.0000	0.0132	1.0000	0.0132	1.0000	0.0132
		20200301	0.0165	1.0000	0.0165	1.0000	0.0165	1.0000	0.0165

Table 3.2.2-3

Projected CO Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)
		20200301	0.0165	1.0000	0.0165	1.0000	0.0165	1.0000	0.0165
		20200301	0.0263	1.0000	0.0263	1.0000	0.0263	1.0000	0.0263
		20200301	0.0329	1.0000	0.0329	1.0000	0.0329	1.0000	0.0329
		20200401	0.0439	1.0000	0.0439	1.0000	0.0439	1.0000	0.0439
		20200401	0.0439	1.0000	0.0439	1.0000	0.0439	1.0000	0.0439
		20200401	0.0439	1.0000	0.0439	1.0000	0.0439	1.0000	0.0439
		20200401	0.0439	1.0000	0.0439	1.0000	0.0439	1.0000	0.0439
		20200301	0.3785	1.0000	0.3785	1.0000	0.3785	1.0000	0.3785
		20200301	0.3785	1.0000	0.3785	1.0000	0.3785	1.0000	0.3785
		Total	1.1530		1.1530		1.1530		1.1530
51-041-00051 50233	Honeywell Nylon Incorporated	10200502	0.0007	1.0000	0.0007	1.0000	0.0007	1.0000	0.0007
		10200502	0.0016	1.0000	0.0016	1.0000	0.0016	1.0000	0.0016
		10200501	0.0023	1.0000	0.0023	1.0000	0.0023	1.0000	0.0023
		10200602	0.0023	1.0000	0.0023	1.0000	0.0023	1.0000	0.0023
		10200502	0.0041	1.0000	0.0041	1.0000	0.0041	1.0000	0.0041
		10200502	0.0050	1.0000	0.0050	1.0000	0.0050	1.0000	0.0050
		10200502	0.0051	1.0000	0.0051	1.0000	0.0051	1.0000	0.0051
		10200602	0.0062	1.0000	0.0062	1.0000	0.0062	1.0000	0.0062
		10200602	0.0126	1.0000	0.0126	1.0000	0.0126	1.0000	0.0126
		10200602	0.0208	1.0000	0.0208	1.0000	0.0208	1.0000	0.0208
		10200602	0.0265	1.0000	0.0265	1.0000	0.0265	1.0000	0.0265
		10200602	0.0272	1.0000	0.0272	1.0000	0.0272	1.0000	0.0272
		Total	0.1145		0.1145		0.1145		0.1145
51-041-00057 50252	Wabash Aluminum Alloys LLC	39000589	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		39000689	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		39000689	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		39000589	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		39000689	0.0016	1.0000	0.0016	1.0000	0.0016	1.0000	0.0016
		Total	0.0023		0.0023		0.0023		0.0023
51-041-00058 50260	Reynolds Metals Company Bellwood Printing Plant	39000689	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		39000689	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		39000689	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		39000689	0.0025	1.0000	0.0025	1.0000	0.0025	1.0000	0.0025
		Total	0.0026		0.0026		0.0026		0.0026
51-041-00062 50298	VSU	10300401	0.0014	1.0000	0.0014	1.0000	0.0014	1.0000	0.0014
		10300602	0.0024	1.0000	0.0024	1.0000	0.0024	1.0000	0.0024
		10200602	0.0043	1.0000	0.0043	1.0000	0.0043	1.0000	0.0043

Projected CO Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)
		10300208	0.0332	1.0000	0.0332	1.0000	0.0332	1.0000	0.0332
	Total		0.0413		0.0413		0.0413		0.0413
51-041-00073 50418	DuPont Teijin Films	10200602	0.0062	1.0000	0.0062	1.0000	0.0062	1.0000	0.0062
		10200602	0.0062	1.0000	0.0062	1.0000	0.0062	1.0000	0.0062
		10200602	0.0196	1.0000	0.0196	1.0000	0.0196	1.0000	0.0196
		10200602	0.0201	1.0000	0.0201	1.0000	0.0201	1.0000	0.0201
		10200602	0.0209	1.0000	0.0209	1.0000	0.0209	1.0000	0.0209
	Total		0.0730		0.0730		0.0730		0.0730
51-041-00078 50554	DuPont De Nemours E I & Company Inc James River PI	10200501	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
	Total		0.0005		0.0005		0.0005		0.0005
51-041-00081 50722	Philip Morris USA Inc - Park 500	10200501	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		10200501	0.0007	1.0000	0.0007	1.0000	0.0007	1.0000	0.0007
		10200501	0.0251	1.0000	0.0251	1.0000	0.0251	1.0000	0.0251
		10200202	0.0438	1.0000	0.0438	1.0000	0.0438	1.0000	0.0438
		10200202	0.1293	1.0000	0.1293	1.0000	0.1293	1.0000	0.1293
	Total		0.1993		0.1993		0.1993		0.1993
51-041-00084 50426	Univar USA Incorporated - Chester	10300603	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10300503	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
	Total		0.0003		0.0003		0.0003		0.0003
51-041-00090 50752	Shoosmith Brothers Inc	30500201	0.0028	0.9713	0.0027	1.0309	0.0029	1.1363	0.0032
		30500201	0.0330	0.9713	0.0321	1.0309	0.0340	1.1363	0.0375
		50300601	0.1158	1.0852	0.1256	1.2629	0.1462	1.4596	0.1689
		50300601	0.1158	1.0852	0.1257	1.2629	0.1463	1.4596	0.1690
		50300601	0.1163	1.0852	0.1261	1.2629	0.1468	1.4596	0.1697
	Total		0.3836		0.4122		0.4761		0.5483
51-041-00110 50906	Super Radiator Coils	10200603	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
	Total		0.0002		0.0002		0.0002		0.0002
51-041-00114 50831	Honeywell International Inc- Technical Center	20300101	0.0049	1.0000	0.0049	1.0000	0.0049	1.0000	0.0049
	Total		0.0049		0.0049		0.0049		0.0049
51-041-00122 50984	Maruchan Virginia Inc	10200603	0.0181	1.0000	0.0181	1.0000	0.0181	1.0000	0.0181
		10200603	0.0226	1.0000	0.0226	1.0000	0.0226	1.0000	0.0226
	Total		0.0407		0.0407		0.0407		0.0407

Table 3.2.2-3

Projected CO Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)
51-041-00133 50766	The Hon Company	39000689	0.0041	1.0000	0.0041	1.0000	0.0041	1.0000	0.0041
	Total		0.0041		0.0041		0.0041		0.0041
51-041-00181 51289	APAC - Virginia, Inc. (Chesterfield Plant)	10300501	0.0070	1.0000	0.0070	1.0000	0.0070	1.0000	0.0070
	Total		0.0070		0.0070		0.0070		0.0070
51-041-00184 51294	Rehrig International Inc	10300603	0.0026	1.0000	0.0026	1.0000	0.0026	1.0000	0.0026
		10300602	0.0032	1.0000	0.0032	1.0000	0.0032	1.0000	0.0032
	Total		0.0058		0.0058		0.0058		0.0058
Hanover Jurisdiction									
51-085-00001 50105	Flippo Lumber Corp	10200906	0.1058	1.0000	0.1058	1.0000	0.1058	1.0000	0.1058
	Total		0.1058		0.1058		0.1058		0.1058
51-085-00004 50055	Tyson Foods Inc	10200602	0.0038	1.0000	0.0038	1.0000	0.0038	1.0000	0.0038
		10200602	0.0044	1.0000	0.0044	1.0000	0.0044	1.0000	0.0044
		10200602	0.0045	1.0000	0.0045	1.0000	0.0045	1.0000	0.0045
		10200602	0.0045	1.0000	0.0045	1.0000	0.0045	1.0000	0.0045
		20100102	0.0139	0.7725	0.0108	0.8049	0.0112	0.8128	0.0113
		20100102	0.0147	0.7725	0.0113	0.8049	0.0118	0.8128	0.0119
		20100102	0.0151	0.7725	0.0117	0.8049	0.0122	0.8128	0.0123
		20100102	0.0193	0.7725	0.0149	0.8049	0.0156	0.8128	0.0157
	Total		0.0801		0.0658		0.0678		0.0683
51-085-00010 50217	US Silica Company Montpelier Operation	10300504	0.0018	1.0000	0.0018	1.0000	0.0018	1.0000	0.0018
	Total		0.0018		0.0018		0.0018		0.0018
51-085-00042 50840	Bear Island Paper Company LLC	10200601	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
		10200601	0.0012	1.0000	0.0012	1.0000	0.0012	1.0000	0.0012
		10200202	0.0141	1.0000	0.0141	1.0000	0.0141	1.0000	0.0141
		10200901	1.7410	1.0000	1.7410	1.0000	1.7410	1.0000	1.7410
	Total		1.7568		1.7568		1.7568		1.7568
51-085-00061 51018	Doswell Limited Partnership	20100101	0.0000	0.7725	0.0000	0.8049	0.0000	0.8128	0.0000
		20100101	0.0001	0.7725	0.0001	0.8049	0.0001	0.8128	0.0001
		20100101	0.0004	0.7725	0.0003	0.8049	0.0003	0.8128	0.0003
		20300101	0.0007	1.0000	0.0007	1.0000	0.0007	1.0000	0.0007
		20100101	0.0014	0.7725	0.0011	0.8049	0.0012	0.8128	0.0012
		20300101	0.0020	1.0000	0.0020	1.0000	0.0020	1.0000	0.0020
		20100101	0.0093	0.7725	0.0072	0.8049	0.0075	0.8128	0.0076
		10200602	0.0118	1.0000	0.0118	1.0000	0.0118	1.0000	0.0118

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Table 3.2.2-3

Projected CO Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)
		10100601	0.0701	1.2886	0.0904	1.7237	0.1209	1.7988	0.1261
		10100601	0.0739	1.2886	0.0952	1.7237	0.1274	1.7988	0.1329
		10100601	0.0813	1.2886	0.1048	1.7237	0.1402	1.7988	0.1463
51-085-00061 51018	Doswell Limited Partnership	10100601	0.0843	1.2886	0.1086	1.7237	0.1453	1.7988	0.1516
		20100201	0.1543	1.2886	0.1989	1.7237	0.2660	1.7988	0.2776
		20100201	0.1625	1.2886	0.2094	1.7237	0.2801	1.7988	0.2923
		20100201	0.1736	1.2886	0.2236	1.7237	0.2992	1.7988	0.3122
		20100201	0.1781	1.2886	0.2295	1.7237	0.3070	1.7988	0.3204
		20100201	0.2223	1.2886	0.2864	1.7237	0.3832	1.7988	0.3998
	Total		1.2261		1.5700		2.0928		2.1830
51-085-00069 51064	Richmond Newspapers Incorporated - Hanover	20200104	0.1743	1.0000	0.1743	1.0000	0.1743	1.0000	0.1743
	Total		0.1743		0.1743		0.1743		0.1743
51-085-00084 51293	Interflex Group Inc - Virginia Plant	10300603	0.0031	1.0000	0.0031	1.0000	0.0031	1.0000	0.0031
	Total		0.0031		0.0031		0.0031		0.0031
51-085-51048 51048	Purgo Inc	39000499	0.0021	1.0000	0.0021	1.0000	0.0021	1.0000	0.0021
		39000599	0.0026	1.0000	0.0026	1.0000	0.0026	1.0000	0.0026
	Total		0.0047		0.0047		0.0047		0.0047
Henrico Jurisdiction									
51-087-00004 50040	Branscome Inc - Richmond Asphalt	30500208	0.0006	1.0000	0.0006	1.0000	0.0006	1.0000	0.0006
		30500201	0.0981	0.9713	0.0953	1.0309	0.1011	1.1363	0.1115
	Total		0.0987		0.0959		0.1017		0.1121
51-087-00027 50358	CadmusMack Byrd Press Division	10200603	0.0036	1.0000	0.0036	1.0000	0.0036	1.0000	0.0036
	Total		0.0036		0.0036		0.0036		0.0036
51-087-00030 50375	Stone Container Corporation Lewis Rd	10200504	0.0016	1.0000	0.0016	1.0000	0.0016	1.0000	0.0016
		10200504	0.0016	1.0000	0.0016	1.0000	0.0016	1.0000	0.0016
		10200602	0.0064	1.0000	0.0064	1.0000	0.0064	1.0000	0.0064
		10200602	0.0064	1.0000	0.0064	1.0000	0.0064	1.0000	0.0064
	Total		0.0160		0.0160		0.0160		0.0160
51-087-00083 50703	Kraft Foods Global- Richmond Bakery	10500206	0.0014	1.0000	0.0014	1.0000	0.0014	1.0000	0.0014
		39000689	0.0022	1.0000	0.0022	1.0000	0.0022	1.0000	0.0022
		10500206	0.0023	1.0000	0.0023	1.0000	0.0023	1.0000	0.0023
		10200603	0.0026	1.0000	0.0026	1.0000	0.0026	1.0000	0.0026
		10200602	0.0026	1.0000	0.0026	1.0000	0.0026	1.0000	0.0026
		39000689	0.0030	1.0000	0.0030	1.0000	0.0030	1.0000	0.0030

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Table 3.2.2-3									
Projected CO Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)
		39000689	0.0031	1.0000	0.0031	1.0000	0.0031	1.0000	0.0031
		10500206	0.0040	1.0000	0.0040	1.0000	0.0040	1.0000	0.0040
		39000689	0.0128	1.0000	0.0128	1.0000	0.0128	1.0000	0.0128
		30290003	0.0307	1.0000	0.0307	1.0000	0.0307	1.0000	0.0307
Total			0.0647		0.0647		0.0647		0.0647
51-087-00100 50773	St Josephs Home	10200501	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10300602	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		10300602	0.0010	1.0000	0.0010	1.0000	0.0010	1.0000	0.0010
		39999992	0.0066	1.1585	0.0076	1.4790	0.0097	1.8064	0.0119
Total			0.0077		0.0088		0.0109		0.0130
51-087-00130 50880	Quebecor Printing Richmond Incorporated	10200602	0.0334	1.0000	0.0334	1.0000	0.0334	1.0000	0.0334
Total			0.0334		0.0334		0.0334		0.0334
51-087-00144 50949	Graphic Packaging International, Inc.	10300603	0.0057	1.0000	0.0057	1.0000	0.0057	1.0000	0.0057
Total			0.0057		0.0057		0.0057		0.0057
51-087-00156 50997	Dominion - Darbytown	20200101	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
		20200201	0.0039	1.0000	0.0039	1.0000	0.0039	1.0000	0.0039
Total			0.0045		0.0045		0.0045		0.0045
51-087-00161 51036	Johns Manville Corporation	10300501	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10300603	0.0026	1.0000	0.0026	1.0000	0.0026	1.0000	0.0026
Total			0.0026		0.0026		0.0026		0.0026
51-087-00168 51069	BFI Waste Systems/Gas Recovery Systems	50200601	0.0005	1.0654	0.0005	1.1836	0.0006	1.3151	0.0006
		20100802	0.1015	1.0024	0.1017	1.0032	0.1018	1.0036	0.1018
Total			0.1020		0.1022		0.1024		0.1025
51-087-00209 51227	BFI Old Dominion Landfill	50200601	0.1291	1.0654	0.1376	1.1836	0.1528	1.3151	0.1698
Total			0.1291		0.1376		0.1528		0.1698
51-087-00210 51232	Infineon Technologies Richmond	10200501	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10200501	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		20100102	0.0020	0.7725	0.0016	0.8049	0.0016	0.8128	0.0017
		10200602	0.0021	1.0000	0.0021	1.0000	0.0021	1.0000	0.0021
		10200602	0.0024	1.0000	0.0024	1.0000	0.0024	1.0000	0.0024
		10200602	0.0032	1.0000	0.0032	1.0000	0.0032	1.0000	0.0032
		10200602	0.0039	1.0000	0.0039	1.0000	0.0039	1.0000	0.0039
		10200602	0.0043	1.0000	0.0043	1.0000	0.0043	1.0000	0.0043

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Table 3.2.2-3									
Projected CO Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)
	Total		0.0179		0.0174		0.0175		0.0175
51-087-00217 51286	Henrico County DPU Springfield Road Landfill	50280001	0.0174	1.0654	0.0186	1.1836	0.0206	1.3151	0.0229
	Total		0.0174		0.0186		0.0206		0.0229
51-087-50039 50039	Blakemore Construction Corp Portugee Rd	30500208	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		30500201	0.0004	0.9713	0.0004	1.0309	0.0005	1.1363	0.0005
		30500208	0.0016	1.0000	0.0016	1.0000	0.0016	1.0000	0.0016
		30500201	0.0047	0.9713	0.0045	1.0309	0.0048	1.1363	0.0053
	Total		0.0070		0.0068		0.0072		0.0077
Prince George Jurisdiction									
51-149-00007 50564	US Army Fort Lee	20200102	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200102	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		10300603	0.0006	1.0000	0.0006	1.0000	0.0006	1.0000	0.0006
		10300603	0.0008	1.0000	0.0008	1.0000	0.0008	1.0000	0.0008
		20200102	0.0011	1.0000	0.0011	1.0000	0.0011	1.0000	0.0011
		20200102	0.0013	1.0000	0.0013	1.0000	0.0013	1.0000	0.0013
		20200102	0.0020	1.0000	0.0020	1.0000	0.0020	1.0000	0.0020
		20200102	0.0038	1.0000	0.0038	1.0000	0.0038	1.0000	0.0038
		10300603	0.0076	1.0000	0.0076	1.0000	0.0076	1.0000	0.0076
	Total		0.0176		0.0176		0.0176		0.0176
51-149-00062 51009	Columbia Gas Transmission Corp- Prince George	10200603	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		20200403	0.0382	1.0000	0.0382	1.0000	0.0382	1.0000	0.0382
		20200403	0.0403	1.0000	0.0403	1.0000	0.0403	1.0000	0.0403
		20200403	0.0519	1.0000	0.0519	1.0000	0.0519	1.0000	0.0519
		20200403	0.0764	1.0000	0.0764	1.0000	0.0764	1.0000	0.0764
		20200403	0.2228	1.0000	0.2228	1.0000	0.2228	1.0000	0.2228
		20200403	0.5434	1.0000	0.5434	1.0000	0.5434	1.0000	0.5434
	Total		0.9731		0.9731		0.9731		0.9731
Colonial Heights Jurisdiction									
51-570-00105 50833	Roslyn Converters Inc	39000689	0.0007	1.0000	0.0007	1.0000	0.0007	1.0000	0.0007
	Total		0.0007		0.0007		0.0007		0.0007
Hopewell Jurisdiction									
51-670-00003 50370	Stone Container Corporation Hopewell	30700122	0.0005	1.0731	0.0006	1.1817	0.0006	1.3025	0.0007
		10200202	0.0567	1.0000	0.0567	1.0000	0.0567	1.0000	0.0567
		30700106	0.0541	1.1006	0.0595	1.2778	0.0691	1.4808	0.0801

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Table 3.2.2-3

Projected CO Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)
		10200901	1.9800	1.0000	1.9800	1.0000	1.9800	1.0000	1.9800
		30700110	5.9500	1.1006	6.5486	1.2778	7.6030	1.4808	8.8106
	Total		8.0413		8.6455		9.7095		10.9281
51-670-00026 50232	Honeywell Nylon Inc- Hopewell	10200603	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10200603	0.0027	1.0000	0.0027	1.0000	0.0027	1.0000	0.0027
		10300603	0.0027	1.0000	0.0027	1.0000	0.0027	1.0000	0.0027
		39990013	0.0028	1.0000	0.0028	1.0000	0.0028	1.0000	0.0028
		10200603	0.0031	1.0000	0.0031	1.0000	0.0031	1.0000	0.0031
		20300101	0.0037	1.0000	0.0037	1.0000	0.0037	1.0000	0.0037
		10200602	0.0043	1.0000	0.0043	1.0000	0.0043	1.0000	0.0043
		10200602	0.0043	1.0000	0.0043	1.0000	0.0043	1.0000	0.0043
		10300602	0.0044	1.0000	0.0044	1.0000	0.0044	1.0000	0.0044
		10201301	0.0045	1.0000	0.0045	1.0000	0.0045	1.0000	0.0045
		49090023	0.0062	1.0000	0.0062	1.0000	0.0062	1.0000	0.0062
		30199999	0.0063	1.0484	0.0066	1.1506	0.0073	1.2682	0.0080
		10200601	0.0232	1.0000	0.0232	1.0000	0.0232	1.0000	0.0232
		10200401	0.0600	1.0000	0.0600	1.0000	0.0600	1.0000	0.0600
		10200602	0.0615	1.0000	0.0615	1.0000	0.0615	1.0000	0.0615
		10200601	0.6925	1.0000	0.6925	1.0000	0.6925	1.0000	0.6925
	Total		0.8822		0.8825		0.8831		0.8838
51-670-00053 50735	Hopewell WWTP	50290006	0.0036	1.0000	0.0036	1.0000	0.0036	1.0000	0.0036
		50200506	0.0630	1.0654	0.0672	1.1836	0.0746	1.3151	0.0829
	Total		0.0667		0.0708		0.0782		0.0865
51-670-00054 50891	Goldschmidt Chemical Corp	10300603	0.0005	1.0000	0.0005	1.0000	0.0005	1.0000	0.0005
		10300603	0.0007	1.0000	0.0007	1.0000	0.0007	1.0000	0.0007
		10300603	0.0009	1.0000	0.0009	1.0000	0.0009	1.0000	0.0009
		10300603	0.0009	1.0000	0.0009	1.0000	0.0009	1.0000	0.0009
		10300603	0.0010	1.0000	0.0010	1.0000	0.0010	1.0000	0.0010
	Total		0.0040		0.0040		0.0040		0.0040
51-670-00055 50950	James River Cogeneration Company	10100204	0.2125	0.9744	0.2070	1.0634	0.2259	1.1947	0.2538
		10100204	0.2264	0.9744	0.2206	1.0634	0.2407	1.1947	0.2704
	Total		0.4388		0.4276		0.4666		0.5242
51-670-00058 50967	Hopewell Cogeneration Ltd Partnership	10200505	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000
		10200604	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		10200604	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		20100201	0.0013	1.2886	0.0017	1.7237	0.0023	1.7988	0.0024

Table 3.2.2-3										
Projected CO Point Source Emissions for the Richmond-Petersburg Non-Attainment Area										
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018		
			CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)	
		20100201	0.0014	1.2886	0.0018	1.7237	0.0024	1.7988	0.0025	
		20100201	0.0014	1.2886	0.0018	1.7237	0.0024	1.7988	0.0025	
		20100101	0.0790	0.7725	0.0610	0.8049	0.0636	0.8128	0.0642	
		20100101	0.0844	0.7725	0.0652	0.8049	0.0679	0.8128	0.0686	
		20100101	0.0897	0.7725	0.0693	0.8049	0.0722	0.8128	0.0729	
Total			0.2574		0.2010		0.2110		0.2133	
Petersburg Jurisdiction										
51-730-00001 50052	Southside Virginia Training Center	10300209	0.0156	1.0000	0.0156	1.0000	0.0156	1.0000	0.0156	
		10300209	0.0168	1.0000	0.0168	1.0000	0.0168	1.0000	0.0168	
		10300209	0.0212	1.0000	0.0212	1.0000	0.0212	1.0000	0.0212	
Total			0.0536		0.0536		0.0536		0.0536	
51-730-00048 50292	Brenco Inc	10200602	0.0242	1.0000	0.0242	1.0000	0.0242	1.0000	0.0242	
Total			0.0242		0.0242		0.0242		0.0242	
Richmond City Jurisdiction										
51-760-00002 50534	Reynolds Metals Company Richmond Foil Plant	10300603	0.0010	1.0000	0.0010	1.0000	0.0010	1.0000	0.0010	
		39000689	0.0118	1.0000	0.0118	1.0000	0.0118	1.0000	0.0118	
		39000689	0.0329	1.0000	0.0329	1.0000	0.0329	1.0000	0.0329	
Total			0.0457		0.0457		0.0457		0.0457	
51-760-00003 50531	Sampson Coatings Inc Hull St Office	10200603	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000	
		10200504	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001	
Total			0.0001		0.0001		0.0001		0.0001	
51-760-00004 50356	Sonoco Products Co	10200601	0.0232	1.0000	0.0232	1.0000	0.0232	1.0000	0.0232	
		10200601	0.0378	1.0000	0.0378	1.0000	0.0378	1.0000	0.0378	
Total			0.0610		0.0610		0.0610		0.0610	
51-760-00009 50082	Philip Morris USA Inc Leaf Processing Facility	39999992	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000	
		10200504	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000	0.0000	
		39999992	0.0000	1.1585	0.0000	1.4790	0.0001	1.8064	0.0001	
		10200504	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001	
		10200602	0.0202	1.0000	0.0202	1.0000	0.0202	1.0000	0.0202	
		10200602	0.0287	1.0000	0.0287	1.0000	0.0287	1.0000	0.0287	
		10200602	0.0391	1.0000	0.0391	1.0000	0.0391	1.0000	0.0391	
Total			0.0881		0.0881		0.0881		0.0881	
51-760-00012 50355	Richmond Paperboard	10200401	0.0221	1.0000	0.0221	1.0000	0.0221	1.0000	0.0221	
		10200602	0.0416	1.0000	0.0416	1.0000	0.0416	1.0000	0.0416	
Total			0.0637		0.0637		0.0637		0.0637	

Table 3.2.2-3

Projected CO Point Source Emissions for the Richmond-Petersburg Non-Attainment Area

County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)
51-760-00013 50126	VCU East Plant	10200401	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		10200401	0.0013	1.0000	0.0013	1.0000	0.0013	1.0000	0.0013
		10200401	0.0019	1.0000	0.0019	1.0000	0.0019	1.0000	0.0019
		10200601	0.0171	1.0000	0.0171	1.0000	0.0171	1.0000	0.0171
		10200601	0.0240	1.0000	0.0240	1.0000	0.0240	1.0000	0.0240
		10200601	0.0322	1.0000	0.0322	1.0000	0.0322	1.0000	0.0322
	Total		0.0768		0.0768		0.0768		0.0768
51-760-00037 50043	APAC-Virginia Inc Rchmd Plt #412	30500207	0.0014	1.0000	0.0014	1.0000	0.0014	1.0000	0.0014
		30500201	0.0112	0.9713	0.0109	1.0309	0.0116	1.1363	0.0128
	Total		0.0127		0.0123		0.0130		0.0142
51-760-00038 50046	Interstate Construction Corp	30500252	0.2245	0.9713	0.2181	1.0309	0.2315	1.1363	0.2551
	Total		0.2245		0.2181		0.2315		0.2551
51-760-00052 50080	Philip Morris USA Inc - Blended Leaf (BL) Plant	30203399	0.0155	0.9217	0.0143	0.9676	0.0150	1.0666	0.0165
		30203399	0.0194	0.9217	0.0179	0.9676	0.0187	1.0666	0.0207
		30203399	0.0264	0.9217	0.0243	0.9676	0.0255	1.0666	0.0281
		30203399	0.0923	0.9217	0.0851	0.9676	0.0893	1.0666	0.0984
		30203399	0.0956	0.9217	0.0881	0.9676	0.0925	1.0666	0.1020
		30203399	0.1138	0.9217	0.1049	0.9676	0.1102	1.0666	0.1214
	Total		0.3630		0.3345		0.3512		0.3871
51-760-00056 50085	Packaging Corporation of America	10200602	0.0087	1.0000	0.0087	1.0000	0.0087	1.0000	0.0087
	Total		0.0087		0.0087		0.0087		0.0087
51-760-00063 50110	TCS Materials - Deepwater Terminal Rd	10300501	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
	Total		0.0001		0.0001		0.0001		0.0001
51-760-00072 50143	Carter Printing	10300501	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
	Total		0.0001		0.0001		0.0001		0.0001
51-760-00084 50199	Interbake Foods Inc	10200603	0.0120	1.0000	0.0120	1.0000	0.0120	1.0000	0.0120
	Total		0.0120		0.0120		0.0120		0.0120
51-760-00087 50209	University of Richmond	20100202	0.0000	1.2886	0.0000	1.7237	0.0000	1.7988	0.0000
		10300602	0.0025	1.0000	0.0025	1.0000	0.0025	1.0000	0.0025
		10300602	0.0036	1.0000	0.0036	1.0000	0.0036	1.0000	0.0036
		10300208	0.0056	1.0000	0.0056	1.0000	0.0056	1.0000	0.0056
		10300208	0.0277	1.0000	0.0277	1.0000	0.0277	1.0000	0.0277

Projected CO Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)
		10300208	0.0447	1.0000	0.0447	1.0000	0.0447	1.0000	0.0447
		10300208	0.0562	1.0000	0.0562	1.0000	0.0562	1.0000	0.0562
		Total	0.1403		0.1403		0.1403		0.1403
51-760-00093 50224	Fergusson, J W and Sons, Inc.	39000689	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		39000689	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		10200602	0.0013	1.0000	0.0013	1.0000	0.0013	1.0000	0.0013
		10200602	0.0013	1.0000	0.0013	1.0000	0.0013	1.0000	0.0013
		Total	0.0029		0.0029		0.0029		0.0029
51-760-00122 50314	Altadis USA	10200501	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		10200602	0.0027	1.0000	0.0027	1.0000	0.0027	1.0000	0.0027
		Total	0.0029		0.0029		0.0029		0.0029
51-760-00123 50334	Citgo Petroleum Corporation	40600141	0.0218	1.0129	0.0221	1.0447	0.0228	1.0792	0.0236
	Total		0.0218		0.0221		0.0228		0.0236
51-760-00129 50344	Mead Westvaco Corporation Headquarters	39999992	0.0001	1.1585	0.0001	1.4790	0.0002	1.8064	0.0002
		39999992	0.0002	1.1585	0.0002	1.4790	0.0003	1.8064	0.0004
		39000689	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		10200603	0.0008	1.0000	0.0008	1.0000	0.0008	1.0000	0.0008
		10200501	0.0016	1.0000	0.0016	1.0000	0.0016	1.0000	0.0016
		10200602	0.0029	1.0000	0.0029	1.0000	0.0029	1.0000	0.0029
		Total	0.0057		0.0058		0.0059		0.0060
51-760-00246 50528	Carpenter Company, Richmond Plant	10201701	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		10200603	0.0051	1.0000	0.0051	1.0000	0.0051	1.0000	0.0051
		Total	0.0051		0.0051		0.0051		0.0051
51-760-00247 50533	Flint Hills Resources LP	10200602	0.0006	1.0000	0.0006	1.0000	0.0006	1.0000	0.0006
		10200501	0.0016	1.0000	0.0016	1.0000	0.0016	1.0000	0.0016
		Total	0.0022		0.0022		0.0022		0.0022
51-760-00264 50591	US Courthouse	10300603	0.0394	1.0000	0.0394	1.0000	0.0394	1.0000	0.0394
	Total		0.0394		0.0394		0.0394		0.0394
51-760-00308 50076	Philip Morris USA Manufacturing Center	39999992	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000
		39999992	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000
		39999992	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000
		39999992	0.0000	1.1585	0.0000	1.4790	0.0000	1.8064	0.0000
		10200501	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		39990013	0.0009	1.0000	0.0009	1.0000	0.0009	1.0000	0.0009

Technical Support Document

Table 3.2.2-3									
Projected CO Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)
		10300603	0.0020	1.0000	0.0020	1.0000	0.0020	1.0000	0.0020
		10300603	0.0020	1.0000	0.0020	1.0000	0.0020	1.0000	0.0020
		10200601	0.0032	1.0000	0.0032	1.0000	0.0032	1.0000	0.0032
		10200601	0.0032	1.0000	0.0032	1.0000	0.0032	1.0000	0.0032
		39990013	0.0036	1.0000	0.0036	1.0000	0.0036	1.0000	0.0036
		10200202	0.0217	1.0000	0.0217	1.0000	0.0217	1.0000	0.0217
		Total	0.0368		0.0368		0.0368		0.0368
51-760-00328 50769	Virginia Union University	10300602	0.0108	1.0000	0.0108	1.0000	0.0108	1.0000	0.0108
		10300602	0.0111	1.0000	0.0111	1.0000	0.0111	1.0000	0.0111
		10300602	0.0124	1.0000	0.0124	1.0000	0.0124	1.0000	0.0124
		10300602	0.0164	1.0000	0.0164	1.0000	0.0164	1.0000	0.0164
		10300602	0.0196	1.0000	0.0196	1.0000	0.0196	1.0000	0.0196
		10300602	0.0231	1.0000	0.0231	1.0000	0.0231	1.0000	0.0231
		10300602	0.0256	1.0000	0.0256	1.0000	0.0256	1.0000	0.0256
		10300602	0.0259	1.0000	0.0259	1.0000	0.0259	1.0000	0.0259
		10300602	0.0345	1.0000	0.0345	1.0000	0.0345	1.0000	0.0345
		10300602	0.0363	1.0000	0.0363	1.0000	0.0363	1.0000	0.0363
		10300602	0.0903	1.0000	0.0903	1.0000	0.0903	1.0000	0.0903
		Total	0.3060		0.3060		0.3060		0.3060
51-760-00375 50923	Richmond Barrel & Box Co Inc	10200603	0.0002	1.0000	0.0002	1.0000	0.0002	1.0000	0.0002
		10200603	0.0015	1.0000	0.0015	1.0000	0.0015	1.0000	0.0015
		Total	0.0017		0.0017		0.0017		0.0017
51-760-00389 50988	Dominion - Bellemeade	20300101	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001
		10200604	0.0357	1.0000	0.0357	1.0000	0.0357	1.0000	0.0357
		10200604	0.0382	1.0000	0.0382	1.0000	0.0382	1.0000	0.0382
		Total	0.0740		0.0740		0.0740		0.0740
51-760-00399 51033	Cogentrix of Richmond	10101201	0.0002	1.0391	0.0002	1.1216	0.0002	1.1806	0.0002
		10101201	0.0007	1.0391	0.0007	1.1216	0.0008	1.1806	0.0008
		10100204	0.2731	0.9744	0.2661	1.0634	0.2904	1.1947	0.3263
		10100204	0.2862	0.9744	0.2788	1.0634	0.3043	1.1947	0.3419
		10100204	0.3415	0.9744	0.3327	1.0634	0.3631	1.1947	0.4080
		10100204	0.3416	0.9744	0.3328	1.0634	0.3632	1.1947	0.4081
		Total	1.2431		1.2113		1.3220		1.4851
51-760-00400 51034	Kinder Morgan Operating LP "A"- Deepwater Terminal	10200603	0.0087	1.0000	0.0087	1.0000	0.0087	1.0000	0.0087
Total	0.0087		0.0087		0.0087		0.0087		
51-760-00405 51055	Wythe Park Power Inc Richmond Plant	20100201	0.0350	1.2886	0.0451	1.7237	0.0603	1.7988	0.0629

Table 3.2.2-3									
Projected CO Point Source Emissions for the Richmond-Petersburg Non-Attainment Area									
County-Plant Id Reg#	Facility Name	SCC	2002	2005		2011		2018	
			CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)	Growth Factor	CO (tpd)
		20100201	0.1052	1.2886	0.1356	1.7237	0.1814	1.7988	0.1893
	Total		0.1402		0.1807		0.2417		0.2522
51-760-00410 51075	Ethyl Corp	20300101	0.0003	1.0000	0.0003	1.0000	0.0003	1.0000	0.0003
		20400401	0.0004	0.9260	0.0003	1.1148	0.0004	1.3616	0.0005
		10200602	0.0004	1.0000	0.0004	1.0000	0.0004	1.0000	0.0004
		20400402	0.0016	0.9260	0.0014	1.1148	0.0017	1.3616	0.0021
		20400402	0.0104	0.9260	0.0096	1.1148	0.0116	1.3616	0.0142
		10200602	0.0106	1.0000	0.0106	1.0000	0.0106	1.0000	0.0106
		20400401	0.0125	0.9260	0.0116	1.1148	0.0139	1.3616	0.0170
	Total		0.0361		0.0342		0.0389		0.0450
51-760-00468 51894	Blue Ridge Paper Products DairyPak Paperboard	10200603	0.0011	1.0000	0.0011	1.0000	0.0011	1.0000	0.0011
	Total		0.0011		0.0011		0.0011		0.0011
Non-attainment Area Total			22.5546		23.3850		25.5884		27.6674

4. Mobile Source Emissions Development

The purpose of this section is to document the development of the on-road mobile source emission inventories and emission projections for the Richmond-Petersburg ozone nonattainment area. A mobile source emission inventory was compiled for an average ozone-season weekday in calendar year 2002, and projection inventories were compiled for an average ozone-season weekday for calendar years 2005, 2011, and 2018. The mobile source inventory includes emissions of reactive volatile organic compounds (VOC), oxides of nitrogen (NO_x), and carbon monoxide (CO) produced by the operation of on-road motor vehicles that are registered to use public roadways and utilize gasoline, diesel, or compressed natural gas fuels. This covers all classes of vehicles from motorcycles to heavy-duty tractor trailers operating on roads ranging from rural access roads to interstate highways. Table 4-1 shows each of the 28 vehicle classes that were modeled.

Table 4-1 Mobile Source Vehicle Types

VTYPE	VEHICLE	VEHICLE DESCRIPTION
1	LDGV	Light-Duty Gasoline Vehicles (Passenger Cars)
2	LDGT1	Light-Duty Gasoline Trucks 1 (0-6000 lbs GVWR, 0-3750 lbs LVW)
3	LDGT2	Light-Duty Gasoline Trucks 2 (0-6000 lbs. GVWR, 3751-5750 lbs. LVW)
4	LDGT3	Light-Duty Gasoline Trucks 3 (6001-8500 lbs GVWR, 0-3750 lbs LVW)
5	LDGT4	Light-Duty Gasoline Trucks 4 (6001-8500 lbs GVWR, 3751-5750 lbs LVW)
6	HDGV2b	Class 2b Heavy-Duty Gasoline Vehicles (8501-10,000 lbs GVWR)
7	HDGV3	Class 3 Heavy-Duty Gasoline Vehicles (10,001-14,000 lbs GVWR)
8	HDGV4	Class 4 Heavy-Duty Gasoline Vehicles (14,001-16,000 lbs GVWR)
9	HDGV5	Class 5 Heavy-Duty Gasoline Vehicles (16,001-19,500 lbs GVWR)
10	HDGV6	Class 6 Heavy-Duty Gasoline Vehicles (19,501-26,000 lbs GVWR)
11	HDGV7	Class 7 Heavy-Duty Gasoline Vehicles (26,001-33,000 lbs GVWR)
12	HDGV8a	Class 8a Heavy-Duty Gasoline Vehicles (33,001-60,000 lbs GVWR)
13	HDGV8b	Class 8b Heavy-Duty Gasoline Vehicles (>60,000 lbs GVWR)
14	LDDV	Light-Duty Diesel Vehicles (Passenger Cars)
15	LDDT12	Light-Duty Diesel Trucks 1 and 2 (0-6000 lbs GVWR)
16	HDDV2b	Class 2b Heavy-Duty Diesel Vehicles (8501-10,000 lbs GVWR)
17	HDDV3	Class 3 Heavy-Duty Diesel Vehicles (10,001-14,000 lbs GVWR)
18	HDDV4	Class 4 Heavy-Duty Diesel Vehicles (14,001-16,000 lbs GVWR)
19	HDDV5	Class 5 Heavy-Duty Diesel Vehicles (16,001-19,500 lbs GVWR)
20	HDDV6	Class 6 Heavy-Duty Diesel Vehicles (19,501-26,000 lbs GVWR)
21	HDDV7	Class 7 Heavy-Duty Diesel Vehicles (26,001-33,000 lbs GVWR)
22	HDDV8a	Class 8a Heavy-Duty Diesel Vehicles (33,001-60,000 lbs GVWR)
23	HDDV8b	Class 8b Heavy-Duty Diesel Vehicles (>60,000 lbs GVWR)
24	MC	Motorcycles (gasoline)
25	HDGB	Gasoline Buses (School, Transit, and Urban)
26	HDDBT	Diesel Transit and Urban Buses
27	HDDBS	Diesel School Buses
28	LDDT34	Light-Duty Diesel Trucks 3 and 4 (6001-8500 lbs GVWR)

In general, the process of estimating on-road mobile source emissions consists of two components: vehicular-related activity level and an average rate of pollutant produced as a result of a particular level of activity. The emission of ozone precursor pollutants from motor vehicles occurs in two main areas; the exhaust system and the evaporative system. The activity data pertinent for mobile emission development is vehicle miles traveled (VMT), which is used to determine exhaust and evaporative emissions from vehicle operation. A pollutant emission rate associated with a particular level of activity was estimated using the EPA Mobile 6.2 emission factor model. The Mobile 6.2 model requires the input of motor vehicle and traffic related information such as average road speed, age and distribution of registered vehicles, the mix of vehicle types that make up the traffic activity (VMT mix), and mobile control programs such as inspection and maintenance programs and anti-tampering programs. These inputs can be expressed specifically for a road type or a jurisdiction. Other factors that influence the emission rate are ambient temperatures and the reid vapor pressure (RVP) of the gasoline, which should accurately represent the travel scenario and the ambient condition modeled. Table 4-2 shows each of the road types modeled.

Mobile Source Road Types		
ROADTYPE	ROADSCC	ROADFHWA
Rural Interstate	110	1
Rural Other Principal Arterial	130	2
Rural Minor Arterial	150	6
Rural Major Collector	170	7
Rural Minor Collector	190	8
Rural Local	210	9
Urban Interstate	230	11
Urban Other Freeways and Expressways	250	12
Urban Other Principal Arterial	270	14
Urban Minor Arterial	290	16
Urban Collector	310	17
Urban Local	330	19

The calculation used to develop the emission estimates presented in this section is shown below.

Equation 1:

$$(AL \times EF/CF^1)/ CF^2 = \text{Emission Estimate (for VOC, NO}_x \text{, or CO)}$$

- AL: Activity Level = VMT (miles) expressed as daily figure
- EF: Emission Factor or emission rate expressed as grams/mile
- CF¹: Conversion Factor for grams to pounds
- CF²: Conversion Factor for pounds to tons

This calculation would allow for the derivation of an emission estimation expressed in units of tons per day. The same equation is used for estimating emissions of all three criteria pollutants and can be applied at the jurisdiction, road type, and vehicle class levels. Table 4-3 summarizes the base and projection year mobile source emission inventories. Table 4-4, Table 4-5, and Table 4-6 provide base and projection year mobile source emissions by jurisdiction. Base and projection year mobile source emissions by vehicle type are included in Table 4.2-7.

Table 4-3

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Base and Projection Year Mobile Source Emission Summary				
Pollutant	2002	2005	2011	2018
VOC	50.200 tpd	43.518 tpd	31.343 tpd	22.845 tpd
NO _x	74.130 tpd	67.155 tpd	40.661 tpd	23.827 tpd
CO	638.216 tpd	509.681 tpd	355.364 tpd	321.035 tpd

Table 4-4				
Base and Projection Year Mobile Source VOC Emissions (tons)				
Pollutant	2002	2005	2011	2018
Charles City	0.493	0.475	0.366	0.252
Chesterfield	11.704	10.883	7.785	5.801
Colonial Heights	1.129	0.936	0.675	0.477
Hanover	6.644	5.426	4.113	3.172
Henrico	12.481	10.957	7.752	5.722
Hopewell	0.852	0.918	0.685	0.486
Petersburg	2.883	2.621	1.917	1.292
Prince George	2.905	2.171	1.630	1.176
Richmond	11.110	9.132	6.420	4.466
TOTAL	50.200	43.518	31.343	22.845

Table 4-5				
Base and Projection Year Mobile Source NOx Emissions (tons)				
Pollutant	2002	2005	2011	2018
Charles City	0.428	0.563	0.382	0.241
Chesterfield	16.722	16.111	9.634	5.859
Colonial Heights	1.653	1.297	0.803	0.478
Hanover	13.110	12.572	7.561	4.196
Henrico	19.719	17.947	10.395	5.982
Hopewell	0.974	1.097	0.750	0.487
Petersburg	2.889	2.295	1.574	1.011
Prince George	5.156	4.077	2.600	1.495
Richmond	13.479	11.196	6.961	4.079
TOTAL	74.130	67.155	40.661	23.827

Table 4-6				
Base and Projection Year Mobile Source CO Emissions (tons)				
Pollutant	2002	2005	2011	2018
Charles City	4.827	5.182	3.706	3.100
Chesterfield	158.370	134.246	92.441	84.132
Colonial Heights	13.938	10.021	7.042	6.274
Hanover	88.795	77.071	53.909	50.236
Henrico	162.650	133.740	92.714	84.592

Table 4-6				
Base and Projection Year Mobile Source CO Emissions (tons)				
Pollutant	2002	2005	2011	2018
Hopewell	9.327	9.048	6.705	6.069
Petersburg	33.119	21.417	15.296	13.274
Prince George	41.068	28.511	19.463	17.375
Richmond	126.120	90.445	64.088	55.983
TOTAL	638.216	509.681	355.364	321.035

With respect to technical review, documentation supporting the development of the mobile source inventory in this ozone redesignation request can be made available upon a written request to the Virginia Department of Environmental Quality, Air Division, P.O. Box 10009, Richmond, Virginia 23240, Attention Mr. Thomas Ballou, Director, Office of Air Data Analysis. In the following sections, the discussion will focus on the development of the mobile source pollutant emission factors and activity data for each of the calendar years evaluated.

4.1. Mobile 6.2 Emission Factor Development

The emission factor modeling using Mobile 6.2 was performed for each of the jurisdictions within the Richmond–Petersburg ozone nonattainment area, which includes Charles City County, Chesterfield County, Colonial Heights City, Hanover County, Henrico County, Hopewell City, Petersburg City, Prince George County, and Richmond City. Each Mobile 6.2 input file prepared contains a separate run for each of the nine jurisdictions, and numerous scenarios representing different road types within each jurisdiction, each modeled with their own average speed.

The temperature, humidity, and barometric pressure inputs were derived by accumulating hourly data from the 10 highest 8-hour ozone days recorded at air monitoring stations in the Richmond-Petersburg ozone nonattainment area between 2003 and 2005. These days and their corresponding 8-hour ozone values are shown in Table 4.1-1 below.

Table 4.1-1		
2003-2005 Richmond Nonattainment Area Air Monitor 10 Highest 8-Hour Ozone Readings (ppm)		
Site	Date	8-hr. Maximum
Chesterfield	8/4/2005	0.105
Chesterfield	6/24/2003	0.104
Henrico	6/25/2003	0.100
Hanover	6/26/2003	0.099
Henrico	8/5/2005	0.095
Charles City	8/2/2005	0.095
Charles City	7/21/2004	0.091
Charles City	7/26/2005	0.091
Hanover	8/26/2003	0.090
Hanover	8/12/2005	0.089

The average temperature and relative humidity for each hour of the day on the 10 highest 8-hour ozone days are shown in Table 4.1-2 below. These 24 hourly temperature and relative humidity values were used in the Mobile 6.2 input files for all analysis years. In addition, an average barometric pressure input was calculated

by averaging the 24 hourly values together in Table 4.1-2.

Table 4.1-2				
Average Hourly Meteorological Data				
Time (EDT)	Temperature (F)	Dew Point (F)	Relative Humidity (%)	Pressure (In)
6:00 AM	71.97	69.00	90.3	30.042
7:00 AM	75.32	69.98	83.8	30.052
8:00 AM	79.73	70.41	73.8	30.056
9:00 AM	83.61	70.02	63.9	30.059
10:00 AM	86.70	69.67	57.0	30.060
11:00 AM	88.72	69.80	53.6	30.052
12:00 PM	90.40	68.37	48.6	30.040
1:00 PM	91.59	68.20	46.7	30.027
2:00 PM	92.50	67.46	44.2	30.010
3:00 PM	92.89	68.18	44.8	29.997
4:00 PM	92.28	68.20	45.8	29.984
5:00 PM	91.61	68.80	47.5	29.977
6:00 PM	90.01	69.93	52.0	29.972
7:00 PM	85.98	71.43	62.5	29.976
8:00 PM	83.30	71.69	68.2	29.981
9:00 PM	80.10	72.31	77.2	29.998
10:00 PM	78.63	72.50	81.4	30.005
11:00 PM	77.93	72.30	82.6	30.004
12:00 AM	74.51	70.51	87.5	30.030
1:00 AM	74.10	70.01	87.4	30.027
2:00 AM	73.41	69.42	87.7	30.022
3:00 AM	72.37	68.82	88.7	30.018
4:00 AM	72.21	68.91	89.6	30.019
5:00 AM	71.50	68.91	91.6	30.030
	Avg Min T	70.97		
	Avg Max T	93.00		
	Avg Pressure	30.018		

For all analysis years, Chesterfield County, Colonial Heights City, Hanover County, Henrico County, Hopewell City, and Richmond City were modeled with reformulated gasoline (RFG), while Petersburg and Prince George were modeled with conventional southern grade gasoline with an average reid vapor pressure (RVP) of 8.4 psi. No inspection and maintenance or anti-tampering programs were included.

The Virginia Department of Motor Vehicles (DMV) provided statewide registration data as of July 1, 2002. This 2002 registration data was reformatted for Mobile 6.2 and used for the 2002 analysis year. The DMV also provided statewide registration data as of July 1, 2005. These 2005 registration data files were used for

the 2005, 2011, and 2018 analysis years.

4.2. Mobile Source Activity Data Development

As summarized in Table 4.2-1 and Table 4.2-2 below, the Virginia Department of Transportation (VDOT) provided the DEQ with jurisdictional, road-specific, average daily VMT and speed data for the 2002 base year and the 2005 attainment year with average growth rates that were compounded annually to estimate VMT for the future years of 2011, and 2018.

Table 4.2-1									
2005 Mobile Source Activity Data									
FIPS	Jurisdiction Name	ROADFHWA	AVDAYVMT	ANNLVMT	RUN	SCEN	GROWTH	SPEED	
041	Chesterfield County	2	248,996	90,883,540	1	1	1.0223	55	
041	Chesterfield County	6	213,337	77,868,005	1	2	1.0202	39.28	
041	Chesterfield County	7	168,083	61,350,295	1	3	1.0226	39.69	
041	Chesterfield County	9	87,529	31,948,085	1	4	1.022	25	
041	Chesterfield County	11	1,626,911	593,822,515	1	5	1.0264	52.25	
041	Chesterfield County	12	2,206,468	805,360,820	1	6	1.0225	49.33	
041	Chesterfield County	14	2,444,045	892,076,425	1	7	1.0196	26.35	
041	Chesterfield County	16	992,855	362,392,075	1	8	1.0193	28.67	
041	Chesterfield County	17	440,006	160,602,190	1	9	1.0199	25.16	
041	Chesterfield County	19	597,433	218,063,045	1	10	1.022	12.9	
085	Hanover County	1	1,285,131	469,072,815	3	1	1.0221	60.56	
085	Hanover County	2	144,913	52,893,245	3	2	1.0261	54.18	
085	Hanover County	6	397,392	145,048,080	3	3	1.0192	45.45	
085	Hanover County	7	373,713	136,405,245	3	4	1.017	39.83	
085	Hanover County	8	107,407	39,203,555	3	5	1.0215	35.38	
085	Hanover County	9	231,330	84,435,450	3	6	1.022	25	
085	Hanover County	11	1,379,019	503,341,935	3	7	1.0373	60.19	
085	Hanover County	14	242,704	88,586,960	3	8	1.0238	30.69	
085	Hanover County	16	317,578	115,915,970	3	9	1.0206	29.94	
085	Hanover County	17	239,339	87,358,735	3	10	1.0246	32.59	
085	Hanover County	19	84,998	31,024,270	3	11	1.022	12.9	
087	Henrico County	1	174,684	63,759,660	4	1	1.0258	62.59	
087	Henrico County	7	21,952	8,012,480	4	2	1.0177	46.6	
087	Henrico County	11	4,073,748	1,486,918,020	4	3	1.0252	54.13	
087	Henrico County	14	1,444,110	527,100,150	4	4	1.0145	25.6	
087	Henrico County	16	1,849,630	675,114,950	4	5	1.0188	28.99	
087	Henrico County	17	577,463	210,773,995	4	6	1.0176	26.65	
087	Henrico County	19	1,194,641	436,043,965	4	7	1.022	12.9	
570	City of Colonial Heights	11	322,842	117,837,330	2	1	1.0232	49	
570	City of Colonial Heights	14	136,727	49,905,355	2	2	1.0111	18.51	
570	City of Colonial Heights	16	26,630	9,719,950	2	3	1.0188	20.75	
570	City of Colonial Heights	17	50,748	18,523,020	2	4	1.0185	17.99	
570	City of Colonial Heights	19	87,329	31,875,085	2	5	1.022	12.9	
670	City of Hopewell	11	232,185	84,747,525	5	1	1.0338	49	
670	City of Hopewell	14	132,689	48,431,485	5	2	1.0171	16.34	
670	City of Hopewell	16	60,305	22,011,325	5	3	1.0146	17.41	
670	City of Hopewell	17	17,015	6,210,475	5	4	1.0132	16.69	
670	City of Hopewell	19	50,296	18,358,040	5	5	1.022	12.9	
760	City of Richmond	11	1,519,256	554,528,440	6	1	1.0196	52.36	
760	City of Richmond	12	212,297	77,488,405	6	2	1.0232	54.4	
760	City of Richmond	14	1,460,121	532,944,165	6	3	1.0129	18.61	
760	City of Richmond	16	1,235,484	450,951,660	6	4	1.015	21.78	

Table 4.2-1								
2005 Mobile Source Activity Data								
FIPS	Jurisdiction Name	ROADFHWA	AVDAYVMT	ANNLVMT	RUN	SCEN	GROWTH	SPEED
760	City of Richmond	17	382,755	139,705,575	6	5	1.0163	20.49
760	City of Richmond	19	893,188	326,013,620	6	6	1.022	12.9
149	Prince George County	1	293,956	107,293,940	7	1	1.0234	63.8
149	Prince George County	2	175,966	64,227,590	7	2	1.0285	54.89
149	Prince George County	6	152,620	55,706,300	7	3	1.0156	47.37
149	Prince George County	7	73,544	26,843,560	7	4	1.0141	45.85
149	Prince George County	8	15,759	5,752,035	7	5	1.021	37.57
149	Prince George County	9	43,550	15,895,750	7	6	1.022	25
149	Prince George County	11	370,310	135,163,150	7	7	1.0284	60.4
149	Prince George County	14	152,929	55,819,085	7	8	1.0193	49.65
149	Prince George County	16	85,708	31,283,420	7	9	1.0168	43.84
149	Prince George County	17	95,335	34,797,275	7	10	1.0204	34.91
149	Prince George County	19	24,165	8,820,225	7	11	1.022	12.9
730	City of Petersburg	11	431,346	157,441,290	8	1	1.023	49
730	City of Petersburg	14	231,506	84,499,690	8	2	1.018	12.66
730	City of Petersburg	16	95,115	34,716,975	8	3	1.0144	12.86
730	City of Petersburg	17	58,557	21,373,305	8	4	1.0176	12.47
730	City of Petersburg	19	120,656	44,039,440	8	5	1.022	12.9
036	Charles City County	6	164,731	60,126,815	9	1	1.0179	52.99
036	Charles City County	7	34,619	12,635,935	9	2	1.0141	37.87
036	Charles City County	8	20,274	7,400,010	9	3	1.0199	31.37
036	Charles City County	9	39,832	14,538,680	9	4	1.022	25

Table 4.2-2								
2002 Mobile Source Activity Data								
FIPS	COUNTY	ROADFHWA	AVDAYVMT	ANNLVMT	RUN	SCEN	GROWTH	SPEED
041	Chesterfield County	2	268,947	98,165,655	1	1	1.01968	54.33
041	Chesterfield County	6	121,129	44,212,085	1	2	1.01643	43.59
041	Chesterfield County	7	157,183	57,371,795	1	3	1.0191	33.97
041	Chesterfield County	9	81,997	29,928,905	1	4	1.022	12.9
041	Chesterfield County	11	1,267,660	462,695,900	1	5	1.0242	53.5
041	Chesterfield County	12	1,290,149	470,904,385	1	6	1.026	61.23
041	Chesterfield County	14	1,981,549	723,265,385	1	7	1.01773	49.7
041	Chesterfield County	16	1,034,453	377,575,345	1	8	1.01826	29.45
041	Chesterfield County	17	414,749	151,383,385	1	9	1.0187	21.55
041	Chesterfield County	19	559,676	204,281,740	1	10	1.022	12.9
085	Hanover County	1	1,378,551	503,171,115	3	1	1.01899	54.53
085	Hanover County	2	133,852	48,855,980	3	2	1.02223	59
085	Hanover County	6	276,470	100,911,550	3	3	1.01686	39.53
085	Hanover County	7	355,284	129,678,660	3	4	1.0184	33.57
085	Hanover County	8	100,767	36,779,955	3	5	1.02144	34.88
085	Hanover County	9	216,710	79,099,150	3	6	1.022	12.9
085	Hanover County	11	821,767	299,944,955	3	7	1.02975	65
085	Hanover County	14	224,719	82,022,435	3	8	1.02151	43
085	Hanover County	16	204,450	74,624,250	3	9	1.01807	29.13

Table 4.2-2								
2002 Mobile Source Activity Data								
FIPS	COUNTY	ROADFHWA	AVDAYVMT	ANNLVMT	RUN	SCEN	GROWTH	SPEED
085	Hanover County	17	222,510	81,216,150	3	10	1.02095	22.58
085	Hanover County	19	79,626	29,063,490	3	11	1.022	12.9
087	Henrico County	1	199,865	72,950,725	4	1	1.02187	58.56
087	Henrico County	7	20,826	7,601,490	4	2	1.01655	17.66
087	Henrico County	11	2,999,082	1,094,664,930	4	3	1.02452	59.24
087	Henrico County	12	74,072	27,036,280	4	4	1.01449	47.75
087	Henrico County	14	1,088,099	397,156,135	4	5	1.01449	47.75
087	Henrico County	16	1,955,509	713,760,785	4	6	1.01974	34
087	Henrico County	17	548,016	200,025,840	4	7	1.01722	22.31
087	Henrico County	19	1,119,141	408,486,465	4	8	1.022	12.9
570	City of Colonial Heights	11	301,075	109,892,375	2	1	1.01859	59.82
570	City of Colonial Heights	14	117,413	42,855,745	2	2	1.01109	35
570	City of Colonial Heights	16	39,697	14,489,405	2	3	1.01866	19.5
570	City of Colonial Heights	17	48,033	17,532,045	2	4	1.02685	23.79
570	City of Colonial Heights	19	81,810	29,860,650	2	5	1.022	12.9
670	City of Hopewell	11	110,564	40,355,860	5	1	1.03192	62
670	City of Hopewell	14	115,765	42,254,225	5	2	1.01387	35
670	City of Hopewell	16	74,758	27,286,670	5	3	1.01674	23.14
670	City of Hopewell	17	16,359	5,971,035	5	4	1.01451	18.78
670	City of Hopewell	19	47,117	17,197,705	5	5	1.022	12.9
760	City of Richmond	11	1,891,270	690,313,550	6	1	1.01651	54.09
760	City of Richmond	12	483,354	176,424,210	6	2	1.01139	56.1
760	City of Richmond	14	797,574	291,114,510	6	3	1.01139	27.6
760	City of Richmond	16	1,066,315	389,204,975	6	4	1.01611	30.48
760	City of Richmond	17	364,632	133,090,680	6	5	1.01629	21.11
760	City of Richmond	19	836,739	305,409,735	6	6	1.022	12.9
149	Prince George County	1	418,961	152,920,765	7	1	1.01963	65
149	Prince George County	2	146,192	53,360,080	7	2	1.02104	58
149	Prince George County	6	100,898	36,827,770	7	3	1.01162	41
149	Prince George County	7	70,519	25,739,435	7	4	1.01649	37
149	Prince George County	8	14,806	5,404,190	7	5	1.01926	38
149	Prince George County	9	40,798	14,891,270	7	6	1.022	12.9
149	Prince George County	11	217,893	79,530,945	7	7	1.02602	65
149	Prince George County	14	142,507	52,015,055	7	8	1.0136	60
149	Prince George County	16	92,448	33,743,520	7	9	1.01533	30
149	Prince George County	17	89,731	32,751,815	7	10	1.01958	25
149	Prince George County	19	22,638	8,262,870	7	11	1.022	12.9
730	City of Petersburg	11	461,327	168,384,355	8	1	1.01763	57
730	City of Petersburg	14	218,357	79,700,305	8	2	1.01663	34
730	City of Petersburg	16	125,061	45,647,265	8	3	1.01743	37

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Table 4.2-2								
2002 Mobile Source Activity Data								
FIPS	COUNTY	ROADFHWA	AVDAYVMT	ANNLVMT	RUN	SCEN	GROWTH	SPEED
730	City of Petersburg	17	55,571	20,283,415	8	4	1.0181	23
730	City of Petersburg	19	113,031	41,256,315	8	5	1.022	12.9
036	Charles City County	6	75,853	27,686,345	9	1	1.01925	43
036	Charles City County	7	33,195	12,116,175	9	2	1.01387	37
036	Charles City County	8	19,110	6,975,150	9	3	1.01932	35
036	Charles City County	9	37,315	13,619,975	9	4	1.022	12.9

VDOT also provided adjustment factors to convert average annual daily VMT to an average ozone season day (ADJFACOS) and average ozone season weekday (ADJFACWD). These factors are provided in Table 4.2-3 below.

Table 4.2-3			
Mobile Source Adjustment Factors			
ROADFHWA	ROADSCC	ADJFACOS	ADJFACWD
1	110	1.033	1.06280
2	130	1.160	1.09877
6	150	1.033	1.06280
7	170	1.024	1.14270
8	190	1.024	1.14270
9	210	1.033	1.06280
11	230	1.033	1.06280
12	250	1.065	1.11303
14	270	1.013	1.14077
16	290	1.007	1.09310
17	310	1.024	1.13737
19	330	1.024	1.14270

Last, VDOT provided VMT mix data for each road type within the nine jurisdictions which are shown in Table 4.2-4. Each value represents the average fractional percentage of each vehicle type that travels on each road type.

In general, 2002 mobile source input parameters, such as VMT, speeds, and registration data, were used to develop the 2002 inventory. 2005 input parameters such as VMT, speeds, and registration data were used to develop the 2005, 2011 and 2018 future year inventories. VMT was grown for future year projections by multiplying the 2005 attainment year VMT by the respective growth rate compounded annually for each road type. A sample Mobile 6.2 input file and output file is attached below in Tables 4.2-5 and 4.2-6, respectively. Base and projection year mobile source emissions by jurisdiction and vehicle type are included in Table 4.2-7.

ROADSCC	Mobile Source VMT Mix Data											
	110	130	150	170	190	210	230	250	270	290	310	330
LDV	0.43246	0.45518	0.48264	0.47976	0.48668	0.50331	0.47332	0.50411	0.49984	0.49907	0.49813	0.49796
LDT1	0.06785	0.07142	0.07572	0.07527	0.07636	0.07897	0.07426	0.07909	0.07842	0.0783	0.07816	0.07813
LDT2	0.22588	0.23775	0.25209	0.2506	0.25421	0.26288	0.24722	0.26331	0.26108	0.26067	0.26018	0.26009
LDT3	0.0688	0.07242	0.07679	0.07633	0.07743	0.08008	0.07531	0.0802	0.07953	0.0794	0.07925	0.07923
LDT4	0.03164	0.0333	0.03531	0.0351	0.03561	0.03682	0.03463	0.03688	0.03657	0.03651	0.03645	0.03643
HDV2B	0.05522	0.04132	0.02418	0.02557	0.02051	0.01088	0.03026	0.0115	0.01361	0.01383	0.01433	0.01366
HDV3	0.00548	0.0041	0.0024	0.00254	0.00203	0.00108	0.003	0.00114	0.00135	0.00137	0.00142	0.00136
HDV4	0.00427	0.00319	0.00187	0.00198	0.00158	0.00084	0.00234	0.00089	0.00105	0.00107	0.00111	0.00106
HDV5	0.00323	0.00241	0.00141	0.00149	0.0012	0.00064	0.00177	0.00067	0.00079	0.00081	0.00084	0.0008
HDV6	0.0121	0.00906	0.0053	0.0056	0.00449	0.00238	0.00663	0.00252	0.00298	0.00303	0.00314	0.00299
HDV7	0.01437	0.01075	0.00629	0.00665	0.00534	0.00283	0.00788	0.00299	0.00354	0.0036	0.00373	0.00356
HDV8A	0.01577	0.0118	0.00691	0.0073	0.00586	0.00311	0.00864	0.00329	0.00389	0.00395	0.00409	0.0039
HDV8B	0.05618	0.04203	0.0246	0.02601	0.02086	0.01107	0.03079	0.0117	0.01384	0.01407	0.01458	0.0139
HDBS	0.00278	0.00208	0.00122	0.00129	0.00103	0.00055	0.00152	0.00058	0.00069	0.0007	0.00072	0.00069
HDBT	0.00128	0.00096	0.00056	0.00059	0.00048	0.00025	0.0007	0.00027	0.00032	0.00032	0.00033	0.00032
MC	0.00269	0.00223	0.00271	0.00392	0.00633	0.00431	0.00173	0.00086	0.0025	0.0033	0.00354	0.00592

Table 4.2-5
Sample Mobile 6.2 Input File

```

MOBILE6 INPUT FILE :
>
> RICHMOND 8-HR NONATTAINMENT AREA
> 2005 MOBILE SOURCE EMISSIONS INCLUDING PM2.5
> RFG, NLEV, NO REFUELING EMISSIONS
> 2005 VMT, 2005 REG DATA
> 2002 VMT MIX, 2005 SPEEDS
> NO RFG IN NEW JURISDICTIONS
> HOURLY TEMPERATURE, HOURLY HUMIDITY, AVERAGE BAROMETRIC PRESSURE
>

REPORT FILE      : C:\02SIP\RICHMOND\2005\RICH05.OUT
DATABASE OUTPUT   :
WITH FIELDNAMES   :
AGGREGATED OUTPUT   :
EMISSIONS TABLE    : C:\02SIP\RICHMOND\2005\RICHM05.TXT REPLACE
PARTICULATES       : SO4 OCARBON ECARBON GASPM LEAD SO2 NH3 BRAKE TIRE

RUN DATA          :
EXPRESS HC AS VOC  :
REG DIST          : C:\MOBILE62\RICHMOND\2005\CHEST05.RDT
NO REFUELING      :
94+ LDG IMP        : C:\MOBILE62\RICHMOND\NLEVNE.D
HOURLY TEMPERATURES: 71.97 75.32 79.73 83.61 86.70 88.72 90.40 91.59 92.50
92.89 92.28 91.61           90.01 85.98 83.30 80.10 78.63 77.93 74.51 74.10 73.41
72.37 72.21 71.50
FUEL PROGRAM      : 4
 150  149  129  120 120  90  30  30
  30   30   30   30  30  30  30
1000 1000 1000 1000 303 303  87  87
   80   80   80   80  80  80  80
FUEL RVP          : 6.8
OXYGENATED FUELS  : 1.00 0.00 0.021 0.00 1

SCENARIO RECORD    : CHESTERFIELD COUNTY, ROADSCC 130, 55 MPH
CALENDAR YEAR      : 2005
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.45518 0.07142 0.23775 0.07242 0.03330 0.04132 0.00410 0.00319
0.00241 0.00906 0.01075 0.01180 0.04203 0.00208 0.00096 0.00223
AVERAGE SPEED       : 55.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5               52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES    : 30.018
PARTICULATE EF      : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE       : 2.5
DIESEL SULFUR       : 357

SCENARIO RECORD    : CHESTERFIELD COUNTY, ROADSCC 150, 39.28 MPH
CALENDAR YEAR      : 2005
EVALUATION MONTH   : 7
VMT FRACTIONS      :

```

Table 4.2-5
Sample Mobile 6.2 Input File

```

0.48264 0.07572 0.25209 0.07679 0.03531 0.02418 0.00240 0.00187
0.00141 0.00530 0.00629 0.00691 0.02460 0.00122 0.00056 0.00271
AVERAGE SPEED      : 39.28 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5               52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES    : 30.018
PARTICULATE EF      : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE       : 2.5
DIESEL SULFUR       : 357

SCENARIO RECORD     : CHESTERFIELD COUNTY, ROADSCC 170, 39.69 MPH
CALENDAR YEAR       : 2005
EVALUATION MONTH    : 7
VMT FRACTIONS       :
0.47976 0.07527 0.25060 0.07633 0.03510 0.02557 0.00254 0.00198
0.00149 0.00560 0.00665 0.00730 0.02601 0.00129 0.00059 0.00392
AVERAGE SPEED       : 39.69 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5               52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES    : 30.018
PARTICULATE EF      : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE       : 2.5
DIESEL SULFUR       : 357

SCENARIO RECORD     : CHESTERFIELD COUNTY, ROADSCC 210, 25 MPH
CALENDAR YEAR       : 2005
EVALUATION MONTH    : 7
VMT FRACTIONS       :
0.50331 0.07897 0.26288 0.08008 0.03682 0.01088 0.00108 0.00084
0.00064 0.00238 0.00283 0.00311 0.01107 0.00055 0.00025 0.00431
AVERAGE SPEED       : 25.0 ARTERIAL
RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5               52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES    : 30.018
PARTICULATE EF      : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE       : 2.5
DIESEL SULFUR       : 357

SCENARIO RECORD     : CHESTERFIELD COUNTY, ROADSCC 230, 52.25 MPH
CALENDAR YEAR       : 2005
EVALUATION MONTH    : 7
VMT FRACTIONS       :
0.47332 0.07426 0.24722 0.07531 0.03463 0.03026 0.00300 0.00234
0.00177 0.00663 0.00788 0.00864 0.03079 0.00152 0.00070 0.00173
AVERAGE SPEED       : 52.25 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5               52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6

```

Table 4.2-5
Sample Mobile 6.2 Input File

```

BAROMETRIC PRES      : 30.018
PARTICULATE EF       : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE        : 2.5
DIESEL SULFUR       : 357

SCENARIO RECORD     : CHESTERFIELD COUNTY, ROADSCC 250, 49.33 MPH
CALENDAR YEAR       : 2005
EVALUATION MONTH    : 7
VMT FRACTIONS       :
0.50411 0.07909 0.26331 0.08020 0.03688 0.01150 0.00114 0.00089
0.00067 0.00252 0.00299 0.00329 0.01170 0.00058 0.00027 0.00086
AVERAGE SPEED        : 49.33 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY    : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                 52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES      : 30.018
PARTICULATE EF       : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE        : 2.5
DIESEL SULFUR       : 357

SCENARIO RECORD     : CHESTERFIELD COUNTY, ROADSCC 270, 26.35 MPH
CALENDAR YEAR       : 2005
EVALUATION MONTH    : 7
VMT FRACTIONS       :
0.49984 0.07842 0.26108 0.07953 0.03657 0.01361 0.00135 0.00105
0.00079 0.00298 0.00354 0.00389 0.01384 0.00069 0.00032 0.00250
AVERAGE SPEED        : 26.35 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY    : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                 52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES      : 30.018
PARTICULATE EF       : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE        : 2.5
DIESEL SULFUR       : 357

SCENARIO RECORD     : CHESTERFIELD COUNTY, ROADSCC 290, 28.67 MPH
CALENDAR YEAR       : 2005
EVALUATION MONTH    : 7
VMT FRACTIONS       :
0.49907 0.07830 0.26067 0.07940 0.03651 0.01383 0.00137 0.00107
0.00081 0.00303 0.00360 0.00395 0.01407 0.00070 0.00032 0.00330
AVERAGE SPEED        : 28.67 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY    : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                 52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES      : 30.018
PARTICULATE EF       : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE        : 2.5
DIESEL SULFUR       : 357

SCENARIO RECORD     : CHESTERFIELD COUNTY, ROADSCC 310, 25.16 MPH

```

Table 4.2-5
Sample Mobile 6.2 Input File

```

CALENDAR YEAR      : 2005
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.49813 0.07816 0.26018 0.07925 0.03645 0.01433 0.00142 0.00111
0.00084 0.00314 0.00373 0.00409 0.01458 0.00072 0.00033 0.00354
AVERAGE SPEED       : 25.16 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY    : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES     : 30.018
PARTICULATE EF       : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE        : 2.5
DIESEL SULFUR        : 357

SCENARIO RECORD      : CHESTERFIELD COUNTY, ROADSCC 330, 12.9 MPH
CALENDAR YEAR        : 2005
EVALUATION MONTH      : 7
VMT FRACTIONS        :
0.49796 0.07813 0.26009 0.07923 0.03643 0.01366 0.00136 0.00106
0.00080 0.00299 0.00356 0.00390 0.01390 0.00069 0.00032 0.00592
VMT BY FACILITY      : C:\MOBILE62\RICHMOND\LOCAL.TXT
RELATIVE HUMIDITY     : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES     : 30.018
PARTICULATE EF       : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE        : 2.5
DIESEL SULFUR        : 357

END OF RUN           :


EXPRESS HC AS VOC    :
REG DIST             : C:\MOBILE62\RICHMOND\2005\COLON05.RDT
NO REFUELING         :
94+ LDG IMP          : C:\MOBILE62\RICHMOND\NLEVNE.D
HOURLY TEMPERATURES: 71.97 75.32 79.73 83.61 86.70 88.72 90.40 91.59 92.50
92.89 92.28 91.61   90.01 85.98 83.30 80.10 78.63 77.93 74.51 74.10 73.41
72.37 72.21 71.50
FUEL PROGRAM         : 4
  150   149   129   120   120   90   30   30
  30    30    30    30    30    30    30
1000  1000  1000  1000  303  303   87   87
  80    80    80    80    80    80
FUEL RVP              : 6.8
OXYGENATED FUELS    : 1.00  0.00  0.021  0.00  1

SCENARIO RECORD      : COLONIAL HEIGHTS CITY, ROADSCC 230, 49.0 MPH
CALENDAR YEAR        : 2005
EVALUATION MONTH      : 7
VMT FRACTIONS        :
0.47332 0.07426 0.24722 0.07531 0.03463 0.03026 0.00300 0.00234

```

Table 4.2-5
Sample Mobile 6.2 Input File

```

0.00177 0.00663 0.00788 0.00864 0.03079 0.00152 0.00070 0.00173
AVERAGE SPEED      : 49.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5               : 52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES    : 30.018
PARTICULATE EF      : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE       : 2.5
DIESEL SULFUR       : 357

SCENARIO RECORD     : COLONIAL HEIGHTS CITY, ROADSCC 270, 18.51 MPH
CALENDAR YEAR       : 2005
EVALUATION MONTH    : 7
VMT FRACTIONS       :
0.49984 0.07842 0.26108 0.07953 0.03657 0.01361 0.00135 0.00105
0.00079 0.00298 0.00354 0.00389 0.01384 0.00069 0.00032 0.00250
AVERAGE SPEED       : 18.51 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5               : 52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES    : 30.018
PARTICULATE EF      : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE       : 2.5
DIESEL SULFUR       : 357

SCENARIO RECORD     : COLONIAL HEIGHTS CITY, ROADSCC 290, 20.75 MPH
CALENDAR YEAR       : 2005
EVALUATION MONTH    : 7
VMT FRACTIONS       :
0.49907 0.07830 0.26067 0.07940 0.03651 0.01383 0.00137 0.00107
0.00081 0.00303 0.00360 0.00395 0.01407 0.00070 0.00032 0.00330
AVERAGE SPEED       : 20.75 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5               : 52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES    : 30.018
PARTICULATE EF      : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE       : 2.5
DIESEL SULFUR       : 357

SCENARIO RECORD     : COLONIAL HEIGHTS CITY, ROADSCC 310, 17.99 MPH
CALENDAR YEAR       : 2005
EVALUATION MONTH    : 7
VMT FRACTIONS       :
0.49813 0.07816 0.26018 0.07925 0.03645 0.01433 0.00142 0.00111
0.00084 0.00314 0.00373 0.00409 0.01458 0.00072 0.00033 0.00354
AVERAGE SPEED       : 17.99 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5               : 52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES    : 30.018

```

Table 4.2-5
Sample Mobile 6.2 Input File

```

PARTICULATE EF      : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE       : 2.5
DIESEL SULFUR       : 357

SCENARIO RECORD     : COLONIAL HEIGHTS CITY, ROADSCC 330, 12.9 MPH
CALENDAR YEAR       : 2005
EVALUATION MONTH    : 7
VMT FRACTIONS       :
0.49796 0.07813 0.26009 0.07923 0.03643 0.01366 0.00136 0.00106
0.00080 0.00299 0.00356 0.00390 0.01390 0.00069 0.00032 0.00592
VMT BY FACILITY    : C:\MOBILE62\RICHMOND\LOCAL.TXT
RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES     : 30.018
PARTICULATE EF       : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE        : 2.5
DIESEL SULFUR        : 357

END OF RUN          :


EXPRESS HC AS VOC   :
REG DIST            : C:\MOBILE62\RICHMOND\2005\HANOV05.RDT
NO REFUELING         :
94+ LDG IMP          : C:\MOBILE62\RICHMOND\NLEVNE.D
HOURLY TEMPERATURES: 71.97 75.32 79.73 83.61 86.70 88.72 90.40 91.59 92.50
92.89 92.28 91.61   90.01 85.98 83.30 80.10 78.63 77.93 74.51 74.10 73.41
72.37 72.21 71.50
FUEL PROGRAM         : 4
  150   149   129   120   120   90   30   30
  30    30    30    30    30    30    30
1000 1000 1000 1000 303 303 87 87
  80    80    80    80    80    80
FUEL RVP             : 6.8
OXYGENATED FUELS    : 1.00 0.00 0.021 0.00 1

SCENARIO RECORD     : HANOVER COUNTY, ROADSCC 110, 60.56 MPH
CALENDAR YEAR       : 2005
EVALUATION MONTH    : 7
VMT FRACTIONS       :
0.43246 0.06785 0.22588 0.06880 0.03164 0.05522 0.00548 0.00427
0.00323 0.01210 0.01437 0.01577 0.05618 0.00278 0.00128 0.00269
AVERAGE SPEED        : 60.56 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES     : 30.018
PARTICULATE EF       : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE        : 2.5
DIESEL SULFUR        : 357

```

Table 4.2-5
Sample Mobile 6.2 Input File

```

SCENARIO RECORD      : HANOVER COUNTY, ROADSCC 130, 54.18 MPH
CALENDAR YEAR        : 2005
EVALUATION MONTH     : 7
VMT FRACTIONS        :
0.45518 0.07142 0.23775 0.07242 0.03330 0.04132 0.00410 0.00319
0.00241 0.00906 0.01075 0.01180 0.04203 0.00208 0.00096 0.00223
AVERAGE SPEED         : 54.18 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY     : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5
                                52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES       : 30.018
PARTICULATE EF          : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE           : 2.5
DIESEL SULFUR          : 357

SCENARIO RECORD      : HANOVER COUNTY, ROADSCC 150, 45.45 MPH
CALENDAR YEAR        : 2005
EVALUATION MONTH     : 7
VMT FRACTIONS        :
0.48264 0.07572 0.25209 0.07679 0.03531 0.02418 0.00240 0.00187
0.00141 0.00530 0.00629 0.00691 0.02460 0.00122 0.00056 0.00271
AVERAGE SPEED         : 45.45 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY     : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5
                                52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES       : 30.018
PARTICULATE EF          : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE           : 2.5
DIESEL SULFUR          : 357

SCENARIO RECORD      : HANOVER COUNTY, ROADSCC 170, 39.83 MPH
CALENDAR YEAR        : 2005
EVALUATION MONTH     : 7
VMT FRACTIONS        :
0.47976 0.07527 0.25060 0.07633 0.03510 0.02557 0.00254 0.00198
0.00149 0.00560 0.00665 0.00730 0.02601 0.00129 0.00059 0.00392
AVERAGE SPEED         : 39.83 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY     : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5
                                52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES       : 30.018
PARTICULATE EF          : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE           : 2.5
DIESEL SULFUR          : 357

SCENARIO RECORD      : HANOVER COUNTY, ROADSCC 190, 35.38 MPH
CALENDAR YEAR        : 2005
EVALUATION MONTH     : 7
VMT FRACTIONS        :
0.48668 0.07636 0.25421 0.07743 0.03561 0.02051 0.00203 0.00158
0.00120 0.00449 0.00534 0.00586 0.02086 0.00103 0.00048 0.00633

```

Table 4.2-5
Sample Mobile 6.2 Input File

AVERAGE SPEED	:	35.38 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5		52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6		
BAROMETRIC PRES	:	30.018
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV		
PARTICLE SIZE	:	2.5
DIESEL SULFUR	:	357
SCENARIO RECORD	:	HANOVER COUNTY, ROADSCC 210, 25 MPH
CALENDAR YEAR	:	2005
EVALUATION MONTH	:	7
VMT FRACTIONS	:	
0.50331 0.07897 0.26288 0.08008 0.03682 0.01088 0.00108 0.00084		
0.00064 0.00238 0.00283 0.00311 0.01107 0.00055 0.00025 0.00431		
AVERAGE SPEED	:	25.0 ARTERIAL
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5		52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6		
BAROMETRIC PRES	:	30.018
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV		
PARTICLE SIZE	:	2.5
DIESEL SULFUR	:	357
SCENARIO RECORD	:	HANOVER COUNTY, ROADSCC 230, 60.19 MPH
CALENDAR YEAR	:	2005
EVALUATION MONTH	:	7
VMT FRACTIONS	:	
0.47332 0.07426 0.24722 0.07531 0.03463 0.03026 0.00300 0.00234		
0.00177 0.00663 0.00788 0.00864 0.03079 0.00152 0.00070 0.00173		
AVERAGE SPEED	:	60.19 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5		52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6		
BAROMETRIC PRES	:	30.018
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV		
PARTICLE SIZE	:	2.5
DIESEL SULFUR	:	357
SCENARIO RECORD	:	HANOVER COUNTY, ROADSCC 270, 30.69 MPH
CALENDAR YEAR	:	2005
EVALUATION MONTH	:	7
VMT FRACTIONS	:	
0.49984 0.07842 0.26108 0.07953 0.03657 0.01361 0.00135 0.00105		
0.00079 0.00298 0.00354 0.00389 0.01384 0.00069 0.00032 0.00250		
AVERAGE SPEED	:	30.69 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5		52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6		
BAROMETRIC PRES	:	30.018
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV

Table 4.2-5
Sample Mobile 6.2 Input File

```

PMDDR2.CSV
PARTICLE SIZE      : 2.5
DIESEL SULFUR     : 357

SCENARIO RECORD   : HANOVER COUNTY, ROADSCC 290, 29.94 MPH
CALENDAR YEAR     : 2005
EVALUATION MONTH  : 7
VMT FRACTIONS     :
0.49907 0.07830 0.26067 0.07940 0.03651 0.01383 0.00137 0.00107
0.00081 0.00303 0.00360 0.00395 0.01407 0.00070 0.00032 0.00330
AVERAGE SPEED     : 29.94 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5              52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES  : 30.018
PARTICULATE EF    : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE      : 2.5
DIESEL SULFUR     : 357

SCENARIO RECORD   : HANOVER COUNTY, ROADSCC 310, 32.59 MPH
CALENDAR YEAR     : 2005
EVALUATION MONTH  : 7
VMT FRACTIONS     :
0.49813 0.07816 0.26018 0.07925 0.03645 0.01433 0.00142 0.00111
0.00084 0.00314 0.00373 0.00409 0.01458 0.00072 0.00033 0.00354
AVERAGE SPEED     : 32.59 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5              52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES  : 30.018
PARTICULATE EF    : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE      : 2.5
DIESEL SULFUR     : 357

SCENARIO RECORD   : HANOVER COUNTY, ROADSCC 330, 12.9 MPH
CALENDAR YEAR     : 2005
EVALUATION MONTH  : 7
VMT FRACTIONS     :
0.49796 0.07813 0.26009 0.07923 0.03643 0.01366 0.00136 0.00106
0.00080 0.00299 0.00356 0.00390 0.01390 0.00069 0.00032 0.00592
VMT BY FACILITY  : C:\MOBILE62\RICHMOND\LOCAL.TXT
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5              52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES  : 30.018
PARTICULATE EF    : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE      : 2.5
DIESEL SULFUR     : 357

END OF RUN        :

```

Table 4.2-5
Sample Mobile 6.2 Input File

```

EXPRESS HC AS VOC      :
REG DIST              : C:\MOBILE62\RICHMOND\2005\HENRI05.RDT
NO REFUELING          :
94+ LDG IMP           : C:\MOBILE62\RICHMOND\NLEVNE.D
HOURLY TEMPERATURES   : 71.97 75.32 79.73 83.61 86.70 88.72 90.40 91.59 92.50
92.89 92.28 91.61      90.01 85.98 83.30 80.10 78.63 77.93 74.51 74.10 73.41
72.37 72.21 71.50
FUEL PROGRAM          : 4
 150    149    129    120   120    90    30    30
  30     30     30     30   30     30    30    30
1000  1000  1000  1000  303  303    87    87
   80     80     80     80   80     80    80    80
FUEL RVP               : 6.8
OXYGENATED FUELS       : 1.00 0.00 0.021 0.00 1

SCENARIO RECORD        : HENRICO COUNTY, ROADSCC 110, 62.59 MPH
CALENDAR YEAR          : 2005
EVALUATION MONTH        : 7

VMT FRACTIONS          :
0.43246 0.06785 0.22588 0.06880 0.03164 0.05522 0.00548 0.00427
0.00323 0.01210 0.01437 0.01577 0.05618 0.00278 0.00128 0.00269
AVERAGE SPEED          : 62.59 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY       : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                  52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES        : 30.018
PARTICULATE EF          : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE           : 2.5
DIESEL SULFUR          : 357

SCENARIO RECORD        : HENRICO COUNTY, ROADSCC 170, 46.6 MPH
CALENDAR YEAR          : 2005
EVALUATION MONTH        : 7
VMT FRACTIONS          :
0.47976 0.07527 0.25060 0.07633 0.03510 0.02557 0.00254 0.00198
0.00149 0.00560 0.00665 0.00730 0.02601 0.00129 0.00059 0.00392
AVERAGE SPEED          : 46.6 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY       : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                  52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES        : 30.018
PARTICULATE EF          : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE           : 2.5
DIESEL SULFUR          : 357

SCENARIO RECORD        : HENRICO COUNTY, ROADSCC 230, 54.13 MPH
CALENDAR YEAR          : 2005
EVALUATION MONTH        : 7
VMT FRACTIONS          :
0.47332 0.07426 0.24722 0.07531 0.03463 0.03026 0.00300 0.00234
0.00177 0.00663 0.00788 0.00864 0.03079 0.00152 0.00070 0.00173

```

Table 4.2-5
Sample Mobile 6.2 Input File

AVERAGE SPEED : 54.13 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5 52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6

BAROMETRIC PRES : 30.018
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 357

SCENARIO RECORD : HENRICO COUNTY, ROADSCC 270, 25.6 MPH
CALENDAR YEAR : 2005
EVALUATION MONTH : 7
VMT FRACTIONS :
0.49984 0.07842 0.26108 0.07953 0.03657 0.01361 0.00135 0.00105
0.00079 0.00298 0.00354 0.00389 0.01384 0.00069 0.00032 0.00250
AVERAGE SPEED : 25.6 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5 52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6

BAROMETRIC PRES : 30.018
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 357

SCENARIO RECORD : HENRICO COUNTY, ROADSCC 290, 28.99 MPH
CALENDAR YEAR : 2005
EVALUATION MONTH : 7
VMT FRACTIONS :
0.49907 0.07830 0.26067 0.07940 0.03651 0.01383 0.00137 0.00107
0.00081 0.00303 0.00360 0.00395 0.01407 0.00070 0.00032 0.00330
AVERAGE SPEED : 28.99 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5 52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6

BAROMETRIC PRES : 30.018
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 357

SCENARIO RECORD : HENRICO COUNTY, ROADSCC 310, 26.65 MPH
CALENDAR YEAR : 2005
EVALUATION MONTH : 7
VMT FRACTIONS :
0.49813 0.07816 0.26018 0.07925 0.03645 0.01433 0.00142 0.00111
0.00084 0.00314 0.00373 0.00409 0.01458 0.00072 0.00033 0.00354
AVERAGE SPEED : 26.65 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5 52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6

BAROMETRIC PRES : 30.018
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV

Table 4.2-5
Sample Mobile 6.2 Input File

```

PMDDR2.CSV
PARTICLE SIZE      : 2.5
DIESEL SULFUR     : 357

SCENARIO RECORD    : HENRICO COUNTY, ROADSCC 330, 12.9 MPH
CALENDAR YEAR      : 2005
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.49796 0.07813 0.26009 0.07923 0.03643 0.01366 0.00136 0.00106
0.00080 0.00299 0.00356 0.00390 0.01390 0.00069 0.00032 0.00592
VMT BY FACILITY   : C:\MOBILE62\RICHMOND\LOCAL.TXT
RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5               52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES    : 30.018
PARTICULATE EF      : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE      : 2.5
DIESEL SULFUR     : 357

END OF RUN         :


EXPRESS HC AS VOC  :
REG DIST          : C:\MOBILE62\RICHMOND\2005\HOPEW05.RDT
NO REFUELING       :
94+ LDG IMP        : C:\MOBILE62\RICHMOND\NLEVNE.D
HOURLY TEMPERATURES: 71.97 75.32 79.73 83.61 86.70 88.72 90.40 91.59 92.50
92.89 92.28 91.61 90.01 85.98 83.30 80.10 78.63 77.93 74.51 74.10 73.41
72.37 72.21 71.50
FUEL PROGRAM       : 4
150   149   129   120  120   90   30   30
30     30   30     30  30     30   30   30
1000  1000  1000  1000 303  303   87   87
80     80   80     80  80     80   80   80
FUEL RVP           : 6.8
OXYGENATED FUELS  : 1.00 0.00 0.021 0.00 1

SCENARIO RECORD    : HOPEWELL CITY, ROADSCC 230, 49.0 MPH
CALENDAR YEAR      : 2005
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.47332 0.07426 0.24722 0.07531 0.03463 0.03026 0.00300 0.00234
0.00177 0.00663 0.00788 0.00864 0.03079 0.00152 0.00070 0.00173
AVERAGE SPEED       : 49.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5               52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES    : 30.018
PARTICULATE EF      : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE      : 2.5
DIESEL SULFUR     : 357

```

Table 4.2-5
Sample Mobile 6.2 Input File

SCENARIO RECORD	:	HOPEWELL CITY, ROADSCC 270, 16.34 MPH	
CALENDAR YEAR	:	2005	
EVALUATION MONTH	:	7	
VMT FRACTIONS	:		
0.49984 0.07842	0.26108 0.07953	0.03657 0.01361	0.00135 0.00105
0.00079 0.00298	0.00354 0.00389	0.01384 0.00069	0.00032 0.00250
AVERAGE SPEED	:	16.34 ARTERIAL	0.0 1.0 0.0 0.0
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8	47.5
		52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6	91.6
BAROMETRIC PRES	:	30.018	
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV	PMDDR2.CSV
PARTICLE SIZE	:	2.5	
DIESEL SULFUR	:	357	
SCENARIO RECORD	:	HOPEWELL CITY, ROADSCC 290, 17.41 MPH	
CALENDAR YEAR	:	2005	
EVALUATION MONTH	:	7	
VMT FRACTIONS	:		
0.49907 0.07830	0.26067 0.07940	0.03651 0.01383	0.00137 0.00107
0.00081 0.00303	0.00360 0.00395	0.01407 0.00070	0.00032 0.00330
AVERAGE SPEED	:	17.41 ARTERIAL	0.0 1.0 0.0 0.0
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8	47.5
		52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6	91.6
BAROMETRIC PRES	:	30.018	
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV	PMDDR2.CSV
PARTICLE SIZE	:	2.5	
DIESEL SULFUR	:	357	
SCENARIO RECORD	:	HOPEWELL CITY, ROADSCC 310, 16.69 MPH	
CALENDAR YEAR	:	2005	
EVALUATION MONTH	:	7	
VMT FRACTIONS	:		
0.49813 0.07816	0.26018 0.07925	0.03645 0.01433	0.00142 0.00111
0.00084 0.00314	0.00373 0.00409	0.01458 0.00072	0.00033 0.00354
AVERAGE SPEED	:	16.69 ARTERIAL	0.0 1.0 0.0 0.0
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8	47.5
		52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6	91.6
BAROMETRIC PRES	:	30.018	
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV	PMDDR2.CSV
PARTICLE SIZE	:	2.5	
DIESEL SULFUR	:	357	
SCENARIO RECORD	:	HOPEWELL CITY, ROADSCC 330, 12.9 MPH	
CALENDAR YEAR	:	2005	
EVALUATION MONTH	:	7	
VMT FRACTIONS	:		
0.49796 0.07813	0.26009 0.07923	0.03643 0.01366	0.00136 0.00106
0.00080 0.00299	0.00356 0.00390	0.01390 0.00069	0.00032 0.00592
VMT BY FACILITY	:	C:\MOBILE62\RICHMOND\LOCAL.TXT	

Table 4.2-5
Sample Mobile 6.2 Input File

```

RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES    : 30.018
PARTICULATE EF      : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE       : 2.5
DIESEL SULFUR       : 357

END OF RUN          :

EXPRESS HC AS VOC  :
REG DIST           : C:\MOBILE62\RICHMOND\2005\RICHM05.RDT
NO REFUELING        :
94+ LDG IMP         : C:\MOBILE62\RICHMOND\NLEVNE.D
HOURLY TEMPERATURES: 71.97 75.32 79.73 83.61 86.70 88.72 90.40 91.59 92.50
92.89 92.28 91.61
                           90.01 85.98 83.30 80.10 78.63 77.93 74.51 74.10 73.41
72.37 72.21 71.50
FUEL PROGRAM        : 4
  150   149   129   120  120   90   30   30
  30     30     30     30   30   30   30
1000  1000  1000  1000 303  303   87   87
  80     80     80     80   80   80   80
FUEL RVP            : 6.8
OXYGENATED FUELS   : 1.00 0.00 0.021 0.00 1

SCENARIO RECORD     : RICHMOND CITY, ROADSCC 230, 52.36 MPH
CALENDAR YEAR       : 2005
EVALUATION MONTH    : 7
VMT FRACTIONS       :
0.47332 0.07426 0.24722 0.07531 0.03463 0.03026 0.00300 0.00234
0.00177 0.00663 0.00788 0.00864 0.03079 0.00152 0.00070 0.00173
AVERAGE SPEED       : 52.36 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES    : 30.018
PARTICULATE EF      : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE       : 2.5
DIESEL SULFUR       : 357

SCENARIO RECORD     : RICHMOND CITY, ROADSCC 250, 54.4 MPH
CALENDAR YEAR       : 2005
EVALUATION MONTH    : 7
VMT FRACTIONS       :
0.50411 0.07909 0.26331 0.08020 0.03688 0.01150 0.00114 0.00089
0.00067 0.00252 0.00299 0.00329 0.01170 0.00058 0.00027 0.00086
AVERAGE SPEED       : 54.4 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY   : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6

```

Table 4.2-5
Sample Mobile 6.2 Input File

```

91.6
BAROMETRIC PRES      : 30.018
PARTICULATE EF        : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE         : 2.5
DIESEL SULFUR        : 357

SCENARIO RECORD       : RICHMOND CITY, ROADSCC 270, 18.61 MPH
CALENDAR YEAR         : 2005
EVALUATION MONTH      : 7
VMT FRACTIONS         :
0.49984 0.07842 0.26108 0.07953 0.03657 0.01361 0.00135 0.00105
0.00079 0.00298 0.00354 0.00389 0.01384 0.00069 0.00032 0.00250
AVERAGE SPEED          : 18.61 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY      : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                  52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6

91.6
BAROMETRIC PRES      : 30.018
PARTICULATE EF        : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE         : 2.5
DIESEL SULFUR        : 357

SCENARIO RECORD       : RICHMOND CITY, ROADSCC 290, 21.78 MPH
CALENDAR YEAR         : 2005
EVALUATION MONTH      : 7
VMT FRACTIONS         :
0.49907 0.07830 0.26067 0.07940 0.03651 0.01383 0.00137 0.00107
0.00081 0.00303 0.00360 0.00395 0.01407 0.00070 0.00032 0.00330
AVERAGE SPEED          : 21.78 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY      : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                  52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6

91.6
BAROMETRIC PRES      : 30.018
PARTICULATE EF        : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE         : 2.5
DIESEL SULFUR        : 357

SCENARIO RECORD       : RICHMOND CITY, ROADSCC 310, 20.49 MPH
CALENDAR YEAR         : 2005
EVALUATION MONTH      : 7
VMT FRACTIONS         :
0.49813 0.07816 0.26018 0.07925 0.03645 0.01433 0.00142 0.00111
0.00084 0.00314 0.00373 0.00409 0.01458 0.00072 0.00033 0.00354
AVERAGE SPEED          : 20.49 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY      : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                  52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6

91.6
BAROMETRIC PRES      : 30.018
PARTICULATE EF        : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE         : 2.5
DIESEL SULFUR        : 357

```

Table 4.2-5
Sample Mobile 6.2 Input File

SCENARIO RECORD	:	RICHMOND CITY, ROADSCC 330, 12.9 MPH
CALENDAR YEAR	:	2005
EVALUATION MONTH	:	7
VMT FRACTIONS	:	
0.49796 0.07813 0.26009 0.07923 0.03643 0.01366 0.00136 0.00106		
0.00080 0.00299 0.00356 0.00390 0.01390 0.00069 0.00032 0.00592		
VMT BY FACILITY	:	C:\MOBILE62\RICHMOND\LOCAL.TXT
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5		52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6		
BAROMETRIC PRES	:	30.018
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV		
PARTICLE SIZE	:	2.5
DIESEL SULFUR	:	357
END OF RUN	:	
EXPRESS HC AS VOC	:	
REG DIST	:	C:\MOBILE62\RICHMOND\2005\PRGEO05.RDT
NO REFUELING	:	
94+ LDG IMP	:	C:\MOBILE62\RICHMOND\NLEVNE.D
HOURLY TEMPERATURES:	71.97 75.32 79.73 83.61 86.70 88.72 90.40 91.59 92.50	
92.89 92.28 91.61		90.01 85.98 83.30 80.10 78.63 77.93 74.51 74.10 73.41
72.37 72.21 71.50		
FUEL PROGRAM	:	1
FUEL RVP	:	8.4
SEASON	:	1
SCENARIO RECORD	:	PRINCE GEORGE COUNTY, ROADSCC 110, 63.8 MPH
CALENDAR YEAR	:	2005
EVALUATION MONTH	:	7
VMT FRACTIONS	:	
0.43246 0.06785 0.22588 0.06880 0.03164 0.05522 0.00548 0.00427		
0.00323 0.01210 0.01437 0.01577 0.05618 0.00278 0.00128 0.00269		
AVERAGE SPEED	:	63.8 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5		52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6		
BAROMETRIC PRES	:	30.018
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV		
PARTICLE SIZE	:	2.5
DIESEL SULFUR	:	357
SCENARIO RECORD	:	PRINCE GEORGE COUNTY, ROADSCC 130, 54.89 MPH
CALENDAR YEAR	:	2005
EVALUATION MONTH	:	7
VMT FRACTIONS	:	
0.45518 0.07142 0.23775 0.07242 0.03330 0.04132 0.00410 0.00319		
0.00241 0.00906 0.01075 0.01180 0.04203 0.00208 0.00096 0.00223		
AVERAGE SPEED	:	54.89 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8

Table 4.2-5
Sample Mobile 6.2 Input File

```

47.5
      52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES   : 30.018
PARTICULATE EF    : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE     : 2.5
DIESEL SULFUR    : 357

SCENARIO RECORD   : PRINCE GEORGE COUNTY, ROADSCC 150, 47.37 MPH
CALENDAR YEAR     : 2005
EVALUATION MONTH  : 7
VMT FRACTIONS     :
0.48264 0.07572 0.25209 0.07679 0.03531 0.02418 0.00240 0.00187
0.00141 0.00530 0.00629 0.00691 0.02460 0.00122 0.00056 0.00271
AVERAGE SPEED     : 47.37 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5
      52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES   : 30.018
PARTICULATE EF    : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE     : 2.5
DIESEL SULFUR    : 357

SCENARIO RECORD   : PRINCE GEORGE COUNTY, ROADSCC 170, 45.85 MPH
CALENDAR YEAR     : 2005
EVALUATION MONTH  : 7
VMT FRACTIONS     :
0.47976 0.07527 0.25060 0.07633 0.03510 0.02557 0.00254 0.00198
0.00149 0.00560 0.00665 0.00730 0.02601 0.00129 0.00059 0.00392
AVERAGE SPEED     : 45.85 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5
      52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES   : 30.018
PARTICULATE EF    : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE     : 2.5
DIESEL SULFUR    : 357

SCENARIO RECORD   : PRINCE GEORGE COUNTY, ROADSCC 190, 37.57 MPH
CALENDAR YEAR     : 2005
EVALUATION MONTH  : 7
VMT FRACTIONS     :
0.48668 0.07636 0.25421 0.07743 0.03561 0.02051 0.00203 0.00158
0.00120 0.00449 0.00534 0.00586 0.02086 0.00103 0.00048 0.00633
AVERAGE SPEED     : 37.57 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5
      52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES   : 30.018
PARTICULATE EF    : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE     : 2.5

```

Table 4.2-5
Sample Mobile 6.2 Input File

DIESEL SULFUR	:	357
SCENARIO RECORD	:	PRINCE GEORGE COUNTY, ROADSCC 210, 25 MPH
CALENDAR YEAR	:	2005
EVALUATION MONTH	:	7
VMT FRACTIONS	:	
0.50331 0.07897 0.26288 0.08008 0.03682 0.01088 0.00108 0.00084		
0.00064 0.00238 0.00283 0.00311 0.01107 0.00055 0.00025 0.00431		
AVERAGE SPEED	:	25.0 ARTERIAL
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
		47.5 52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6		
BAROMETRIC PRES	:	30.018
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV		
PARTICLE SIZE	:	2.5
DIESEL SULFUR	:	357
SCENARIO RECORD	:	PRINCE GEORGE COUNTY, ROADSCC 230, 60.4 MPH
CALENDAR YEAR	:	2005
EVALUATION MONTH	:	7
VMT FRACTIONS	:	
0.47332 0.07426 0.24722 0.07531 0.03463 0.03026 0.00300 0.00234		
0.00177 0.00663 0.00788 0.00864 0.03079 0.00152 0.00070 0.00173		
AVERAGE SPEED	:	60.4 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
		47.5 52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6		
BAROMETRIC PRES	:	30.018
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV		
PARTICLE SIZE	:	2.5
DIESEL SULFUR	:	357
SCENARIO RECORD	:	PRINCE GEORGE COUNTY, ROADSCC 270, 49.65 MPH
CALENDAR YEAR	:	2005
EVALUATION MONTH	:	7
VMT FRACTIONS	:	
0.49984 0.07842 0.26108 0.07953 0.03657 0.01361 0.00135 0.00105		
0.00079 0.00298 0.00354 0.00389 0.01384 0.00069 0.00032 0.00250		
AVERAGE SPEED	:	49.65 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
		47.5 52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6		
BAROMETRIC PRES	:	30.018
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV		
PARTICLE SIZE	:	2.5
DIESEL SULFUR	:	357
SCENARIO RECORD	:	PRINCE GEORGE COUNTY, ROADSCC 290, 43.84 MPH
CALENDAR YEAR	:	2005
EVALUATION MONTH	:	7
VMT FRACTIONS	:	

Table 4.2-5
Sample Mobile 6.2 Input File

```

0.49907 0.07830 0.26067 0.07940 0.03651 0.01383 0.00137 0.00107
0.00081 0.00303 0.00360 0.00395 0.01407 0.00070 0.00032 0.00330
AVERAGE SPEED : 43.84 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5
91.6
52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
BAROMETRIC PRES : 30.018
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 357

SCENARIO RECORD : PRINCE GEORGE COUNTY, ROADSCC 310, 34.91 MPH
CALENDAR YEAR : 2005
EVALUATION MONTH : 7
VMT FRACTIONS :
0.49813 0.07816 0.26018 0.07925 0.03645 0.01433 0.00142 0.00111
0.00084 0.00314 0.00373 0.00409 0.01458 0.00072 0.00033 0.00354
AVERAGE SPEED : 34.91 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5
91.6
52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
BAROMETRIC PRES : 30.018
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 357

SCENARIO RECORD : PRINCE GEORGE COUNTY, ROADSCC 330, 12.9 MPH
CALENDAR YEAR : 2005
EVALUATION MONTH : 7
VMT FRACTIONS :
0.49796 0.07813 0.26009 0.07923 0.03643 0.01366 0.00136 0.00106
0.00080 0.00299 0.00356 0.00390 0.01390 0.00069 0.00032 0.00592
VMT BY FACILITY : C:\MOBILE62\RICHMOND\LOCAL.TXT
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5
91.6
52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
BAROMETRIC PRES : 30.018
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 357

END OF RUN :
```



```

EXPRESS HC AS VOC :
REG DIST : C:\MOBILE62\RICHMOND\2005\PETER05.RDT
NO REFUELING :
94+ LDG IMP : C:\MOBILE62\RICHMOND\NLEVNE.D
HOURLY TEMPERATURES: 71.97 75.32 79.73 83.61 86.70 88.72 90.40 91.59 92.50
92.89 92.28 91.61
90.01 85.98 83.30 80.10 78.63 77.93 74.51 74.10 73.41

```

Table 4.2-5
Sample Mobile 6.2 Input File

```

72.37 72.21 71.50
FUEL PROGRAM      : 1
FUEL RVP          : 8.4
SEASON            : 1

SCENARIO RECORD   : PETERSBURG CITY, ROADSCC 230, 49.0 MPH
CALENDAR YEAR     : 2005
EVALUATION MONTH  : 7
VMT FRACTIONS     :
0.47332 0.07426 0.24722 0.07531 0.03463 0.03026 0.00300 0.00234
0.00177 0.00663 0.00788 0.00864 0.03079 0.00152 0.00070 0.00173
AVERAGE SPEED     : 49.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5              52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES   : 30.018
PARTICULATE EF     : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE      : 2.5
DIESEL SULFUR     : 357

SCENARIO RECORD   : PETERSBURG CITY, ROADSCC 270, 12.66 MPH
CALENDAR YEAR     : 2005
EVALUATION MONTH  : 7
VMT FRACTIONS     :
0.49984 0.07842 0.26108 0.07953 0.03657 0.01361 0.00135 0.00105
0.00079 0.00298 0.00354 0.00389 0.01384 0.00069 0.00032 0.00250
AVERAGE SPEED     : 12.66 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5              52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES   : 30.018
PARTICULATE EF     : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE      : 2.5
DIESEL SULFUR     : 357

SCENARIO RECORD   : PETERSBURG CITY, ROADSCC 290, 12.86 MPH
CALENDAR YEAR     : 2005
EVALUATION MONTH  : 7
VMT FRACTIONS     :
0.49907 0.07830 0.26067 0.07940 0.03651 0.01383 0.00137 0.00107
0.00081 0.00303 0.00360 0.00395 0.01407 0.00070 0.00032 0.00330
AVERAGE SPEED     : 12.86 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5              52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES   : 30.018
PARTICULATE EF     : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE      : 2.5
DIESEL SULFUR     : 357

SCENARIO RECORD   : PETERSBURG CITY, ROADSCC 310, 12.47 MPH
CALENDAR YEAR     : 2005

```

Table 4.2-5
Sample Mobile 6.2 Input File

```

EVALUATION MONTH      : 7
VMT FRACTIONS         :
0.49813 0.07816 0.26018 0.07925 0.03645 0.01433 0.00142 0.00111
0.00084 0.00314 0.00373 0.00409 0.01458 0.00072 0.00033 0.00354
AVERAGE SPEED         : 12.47 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY     : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                  52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES      : 30.018
PARTICULATE EF        : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE         : 2.5
DIESEL SULFUR        : 357

SCENARIO RECORD       : PETERSBURG CITY, ROADSCC 330, 12.9 MPH
CALENDAR YEAR         : 2005
EVALUATION MONTH      : 7
VMT FRACTIONS         :
0.49796 0.07813 0.26009 0.07923 0.03643 0.01366 0.00136 0.00106
0.00080 0.00299 0.00356 0.00390 0.01390 0.00069 0.00032 0.00592
VMT BY FACILITY      : C:\MOBILE62\RICHMOND\LOCAL.TXT
RELATIVE HUMIDITY     : 90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5                  52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6
BAROMETRIC PRES      : 30.018
PARTICULATE EF        : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE         : 2.5
DIESEL SULFUR        : 357

END OF RUN            :

EXPRESS HC AS VOC    :
REG DIST              : C:\MOBILE62\RICHMOND\2005\CHARL05.RDT
NO REFUELING          :
94+ LDG IMP           : C:\MOBILE62\RICHMOND\NLEVNE.D
HOURLY TEMPERATURES: 71.97 75.32 79.73 83.61 86.70 88.72 90.40 91.59 92.50
92.89 92.28 91.61   90.01 85.98 83.30 80.10 78.63 77.93 74.51 74.10 73.41
72.37 72.21 71.50
FUEL PROGRAM          : 4
  150   149   129   120   120   90   30   30
  30    30    30    30    30    30    30
1000  1000  1000  1000  303  303   87   87
  80    80    80    80    80    80
FUEL RVP               : 6.8
OXYGENATED FUELS      : 1.00 0.00 0.021 0.00 1

SCENARIO RECORD       : CHARLES CITY COUNTY, ROADSCC 150, 52.99 MPH
CALENDAR YEAR         : 2005
EVALUATION MONTH      : 7
VMT FRACTIONS         :
0.48264 0.07572 0.25209 0.07679 0.03531 0.02418 0.00240 0.00187
0.00141 0.00530 0.00629 0.00691 0.02460 0.00122 0.00056 0.00271

```

Table 4.2-5
Sample Mobile 6.2 Input File

AVERAGE SPEED	:	52.99 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5		52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6		
BAROMETRIC PRES	:	30.018
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV		
PARTICLE SIZE	:	2.5
DIESEL SULFUR	:	357
SCENARIO RECORD	:	CHARLES CITY COUNTY, ROADSCC 170, 37.87 MPH
CALENDAR YEAR	:	2005
EVALUATION MONTH	:	7
VMT FRACTIONS	:	
0.47976 0.07527 0.25060 0.07633 0.03510 0.02557 0.00254 0.00198		
0.00149 0.00560 0.00665 0.00730 0.02601 0.00129 0.00059 0.00392		
AVERAGE SPEED	:	37.87 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5		52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6		
BAROMETRIC PRES	:	30.018
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV		
PARTICLE SIZE	:	2.5
DIESEL SULFUR	:	357
SCENARIO RECORD	:	CHARLES CITY COUNTY, ROADSCC 190, 31.37 MPH
CALENDAR YEAR	:	2005
EVALUATION MONTH	:	7
VMT FRACTIONS	:	
0.48668 0.07636 0.25421 0.07743 0.03561 0.02051 0.00203 0.00158		
0.00120 0.00449 0.00534 0.00586 0.02086 0.00103 0.00048 0.00633		
AVERAGE SPEED	:	31.37 ARTERIAL 0.0 1.0 0.0 0.0
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5		52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6		
BAROMETRIC PRES	:	30.018
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV		
PARTICLE SIZE	:	2.5
DIESEL SULFUR	:	357
SCENARIO RECORD	:	CHARLES CITY COUNTY, ROADSCC 210, 25 MPH
CALENDAR YEAR	:	2005
EVALUATION MONTH	:	7
VMT FRACTIONS	:	
0.50331 0.07897 0.26288 0.08008 0.03682 0.01088 0.00108 0.00084		
0.00064 0.00238 0.00283 0.00311 0.01107 0.00055 0.00025 0.00431		
AVERAGE SPEED	:	25.0 ARTERIAL
RELATIVE HUMIDITY	:	90.3 83.8 73.8 63.9 57.0 53.6 48.6 46.7 44.2 44.8 45.8
47.5		52.0 62.5 68.2 77.2 81.4 82.6 87.5 87.4 87.7 88.7 89.6
91.6		
BAROMETRIC PRES	:	30.018
PARTICULATE EF	:	PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV

Table 4.2-5
Sample Mobile 6.2 Input File

PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 357
END OF RUN :

Table 4.2-6
Sample Mobile 6.2 Output File

```
*****
* MOBILE6.2.03 (24-Sep-2003) *
* Input file: C:\02SIP\RICHMOND\TEST\RICH05.IN (file 1, run 1). *
*****
```

* Reading Registration Distributions from the following external
* data file: C:\MOBILE62\RICHMOND\2005\CHEST05.RDT

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

M603 Comment: User has disabled the calculation of REFUELING emissions.

* Reading 94+ LEV IMPLEMENTATION SCHEDULE from the following external
* data file: C:\MOBILE62\RICHMOND\NLEVNE.D

M616 Comment: User has supplied post-1999 sulfur levels.

* #
* CHESTERFIELD COUNTY, ROADSCC 130, 55 MPH
* File 1, Run 1, Scenario 1.
* #
M615 Comment: User supplied VMT mix.

M582 Warning: The user supplied freeway average speed of 55.0
will be used for all hours of the day. 100% of VMT
has been assigned to a fixed combination of freeways
and freeway ramps for all hours of the day and all
vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV

M 48 Warning: there are no sales for vehicle class HDGV8b

* Reading Ammonia (NH3) Basic Emission Rates
* from the external data file PMNH3BER.D

* Reading Ammonia (NH3) Sulfur Deterioration Rates
* from the external data file PMNH3SDR.D

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
Calendar Year: 2005

Table 4.2-6
Sample Mobile 6.2 Output File

Month:	July									
Altitude:	Low									
Minimum Temperature:	71.5 (F)									
Maximum Temperature:	92.9 (F)									
Minimum Rel. Hum.:	44.2 (%)									
Maximum Rel. Hum.:	91.6 (%)									
Barometric Pressure:	30.02 (inches Hg)									
Nominal Fuel RVP:	6.8 psi									
Weathered RVP:	6.5 psi									
Fuel Sulfur Content:	90. ppm									
Exhaust I/M Program:	No									
Evap I/M Program:	No									
ATP Program:	No									
Reformulated Gas:	No									
Ether Blend Market Share:	1.000	Alcohol Blend Market Share:	0.000							
Ether Blend Oxygen Content:	0.021	Alcohol Blend Oxygen Content:	0.000							
		Alcohol Blend RVP Waiver:	No							
Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4543	0.3090	0.1042		0.0379	0.0009	0.0017	0.0898	0.0022	1.0000
<hr/>										
Composite Emission Factors (g/mi):										
Composite VOC :	0.854	0.850	0.860	0.853	0.715	0.597	0.531	0.332	2.40	0.804
Composite CO :	14.07	14.77	14.68	14.75	10.15	1.594	0.984	1.969	14.12	13.083
Composite NOX :	0.908	1.049	1.199	1.087	4.838	1.859	1.499	14.015	1.29	2.311
<hr/>										

* #

* CHESTERFIELD COUNTY, ROADSCC 150, 39.28 MPH

* File 1, Run 1, Scenario 2.

* #

M615 Comment:

User supplied VMT mix.

M583 Warning:

The user supplied arterial average speed of 39.3
will be used for all hours of the day. 100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV

M 48 Warning:

there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

 Calendar Year: 2005

 Month: July

 Altitude: Low

 Minimum Temperature: 71.5 (F)

 Maximum Temperature: 92.9 (F)

 Minimum Rel. Hum.: 44.2 (%)

 Maximum Rel. Hum.: 91.6 (%)

 Barometric Pressure: 30.02 (inches Hg)

 Nominal Fuel RVP: 6.8 psi

 Weathered RVP: 6.5 psi

 Fuel Sulfur Content: 90. ppm

Exhaust I/M Program: No

 Evap I/M Program: No

 ATP Program: No

 Reformulated Gas: No

Ether Blend Market Share: 1.000

Ether Blend Oxygen Content: 0.021

Alcohol Blend Market Share: 0.000

Alcohol Blend Oxygen Content: 0.000

Alcohol Blend RVP Waiver: No

Table 4.2-6
Sample Mobile 6.2 Output File

Vehicle Type: GVWR:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4817	0.3277	0.1105		0.0222	0.0009	0.0018	0.0526	0.0027	1.0000
Composite Emission Factors (g/mi):										
Composite VOC :	0.912	0.908	0.919	0.910	0.845	0.653	0.589	0.403	2.27	0.886
Composite CO :	11.16	12.15	12.20	12.17	8.57	1.580	0.974	1.926	10.97	11.030
Composite NOX :	0.856	0.970	1.121	1.008	4.294	1.309	1.049	8.942	1.05	1.425

* #										
* CHESTERFIELD COUNTY, ROADSCC 170, 39.69 MPH										
* File 1, Run 1, Scenario 3.										
* #										
M615 Comment:	User supplied VMT mix.									
M583 Warning:	The user supplied arterial average speed of 39.7 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.									
* Reading PM Gas Carbon ZML Levels										
* from the external data file PMGZML.CSV										
* Reading PM Gas Carbon DR1 Levels										
* from the external data file PMGDR1.CSV										
* Reading PM Gas Carbon DR2 Levels										
* from the external data file PMGDR2.CSV										
* Reading PM Diesel Zero Mile Levels										
* from the external data file PMDZML.CSV										
* Reading the First PM Deterioration Rates										
* from the external data file PMDDR1.CSV										
* Reading the Second PM Deterioration Rates										
* from the external data file PMDDR2.CSV										
M 48 Warning:	there are no sales for vehicle class HDGV8b									
LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D										
Calendar Year: 2005										
Month: July										
Altitude: Low										
Minimum Temperature: 71.5 (F)										
Maximum Temperature: 92.9 (F)										
Minimum Rel. Hum.: 44.2 (%)										
Maximum Rel. Hum.: 91.6 (%)										
Barometric Pressure: 30.02 (inches Hg)										
Nominal Fuel RVP: 6.8 psi										
Weathered RVP: 6.5 psi										
Fuel Sulfur Content: 90. ppm										
Exhaust I/M Program: No										
Evap I/M Program: No										
ATP Program: No										
Reformulated Gas: No										
Ether Blend Market Share: 1.000	Alcohol Blend Market Share: 0.000									
Ether Blend Oxygen Content: 0.021	Alcohol Blend Oxygen Content: 0.000									
Alcohol Blend RVP Waiver: No										
Vehicle Type: GVWR:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4788	0.3257	0.1098		0.0234	0.0009	0.0018	0.0556	0.0039	1.0000
Composite Emission Factors (g/mi):										
Composite VOC :	0.911	0.906	0.917	0.909	0.839	0.651	0.586	0.400	2.27	0.884
Composite CO :	11.21	12.20	12.25	12.21	8.52	1.575	0.970	1.911	10.89	11.038
Composite NOX :	0.856	0.971	1.122	1.009	4.306	1.311	1.051	8.957	1.05	1.455

* #										
* CHESTERFIELD COUNTY, ROADSCC 210, 25 MPH										
* File 1, Run 1, Scenario 4.										
* #										
M615 Comment:	User supplied VMT mix.									
M583 Warning:										

Table 4.2-6
Sample Mobile 6.2 Output File

The user supplied arterial average speed of 25.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

- * Reading PM Gas Carbon ZML Levels
- * from the external data file PMGZML.CSV

- * Reading PM Gas Carbon DR1 Levels
- * from the external data file PMGDR1.CSV

- * Reading PM Gas Carbon DR2 Levels
- * from the external data file PMGDR2.CSV

- * Reading PM Diesel Zero Mile Levels
- * from the external data file PMDZML.CSV

- * Reading the First PM Deterioration Rates
- * from the external data file PMDDR1.CSV

- * Reading the Second PM Deterioration Rates
- * from the external data file PMDDR2.CSV

M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

Calendar Year: 2005

Month: July

Altitude: Low

Minimum Temperature: 71.5 (F)

Maximum Temperature: 92.9 (F)

Minimum Rel. Hum.: 44.2 (%)

Maximum Rel. Hum.: 91.6 (%)

Barometric Pressure: 30.02 (inches Hg)

Nominal Fuel RVP: 6.8 psi

Weathered RVP: 6.5 psi

Fuel Sulfur Content: 90. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Ether Blend Market Share: 1.000	Alcohol Blend Market Share: 0.000
Ether Blend Oxygen Content: 0.021	Alcohol Blend Oxygen Content: 0.000
Alcohol Blend RVP Waiver: No	

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
GVWR:	<6000	>6000	(All)							
VMT Distribution:	0.5023	0.3417	0.1152		0.0100	0.0010	0.0018	0.0237	0.0043	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	1.038	1.026	1.041	1.030	1.213	0.799	0.742	0.591	2.69	1.032
Composite CO :	10.45	11.35	11.49	11.38	12.63	1.902	1.206	2.929	15.86	10.719
Composite NOX :	0.935	1.023	1.182	1.063	3.831	1.347	1.080	9.206	0.94	1.219

* # # # # # # # # # # # # # # # # #
* CHESTERFIELD COUNTY, ROADSCC 230, 52.25 MPH

* File 1, Run 1, Scenario 5.

* # # # # # # # # # # # # # # # # #
M615 Comment:

User supplied VMT mix.

M582 Warning:

The user supplied freeway average speed of 52.3 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

- * Reading PM Gas Carbon ZML Levels
- * from the external data file PMGZML.CSV

- * Reading PM Gas Carbon DR1 Levels
- * from the external data file PMGDR1.CSV

- * Reading PM Gas Carbon DR2 Levels
- * from the external data file PMGDR2.CSV

- * Reading PM Diesel Zero Mile Levels
- * from the external data file PMDZML.CSV

- * Reading the First PM Deterioration Rates

Table 4.2-6
Sample Mobile 6.2 Output File

```

* from the external data file PMDDR1.CSV
* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July
            Altitude: Low
    Minimum Temperature: 71.5 (F)
    Maximum Temperature: 92.9 (F)
        Minimum Rel. Hum.: 44.2 (%)
        Maximum Rel. Hum.: 91.6 (%)
    Barometric Pressure: 30.02 (inches Hg)
        Nominal Fuel RVP: 6.8 psi
        Weathered RVP: 6.5 psi
    Fuel Sulfur Content: 90. ppm

    Exhaust I/M Program: No
        Evap I/M Program: No
        ATP Program: No
        Reformulated Gas: No

Ether Blend Market Share: 1.000      Alcohol Blend Market Share: 0.000
Ether Blend Oxygen Content: 0.021   Alcohol Blend Oxygen Content: 0.000
                                    Alcohol Blend RVP Waiver: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh
  GVWR: <6000 >6000 (All)
  ----- -----
  VMT Distribution: 0.4724 0.3213 0.1084 0.0277 0.0009 0.0017 0.0658 0.0017 1.0000
----- -----
Composite Emission Factors (g/mi):
  Composite VOC : 0.864 0.860 0.871 0.863 0.724 0.601 0.535 0.337 2.20 0.827
  Composite CO : 13.65 14.37 14.30 14.35 9.30 1.563 0.962 1.874 9.98 13.019
  Composite NOX : 0.900 1.037 1.187 1.075 4.738 1.679 1.352 12.773 1.22 1.865
----- -----
```

```

* # # # # # # # # # # # # # # # # #
* CHESTERFIELD COUNTY, ROADSCC 250, 49.33 MPH
* File 1, Run 1, Scenario 6.
* # # # # # # # # # # # # # # # # #
M615 Comment:
    User supplied VMT mix.

M582 Warning:
    The user supplied freeway average speed of 49.3
    will be used for all hours of the day. 100% of VMT
    has been assigned to a fixed combination of freeways
    and freeway ramps for all hours of the day and all
    vehicle types.
```

```

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV
* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV
* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV
* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV
* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV
* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July
            Altitude: Low
    Minimum Temperature: 71.5 (F)
    Maximum Temperature: 92.9 (F)
        Minimum Rel. Hum.: 44.2 (%)
        Maximum Rel. Hum.: 91.6 (%)
    Barometric Pressure: 30.02 (inches Hg)
        Nominal Fuel RVP: 6.8 psi
        Weathered RVP: 6.5 psi
```

Table 4.2-6
Sample Mobile 6.2 Output File

Fuel Sulfur Content:	90. ppm										
Exhaust I/M Program:	No										
Evap I/M Program:	No										
ATP Program:	No										
Reformulated Gas:	No										
Ether Blend Market Share:	1.000	Alcohol Blend Market Share:	0.000								
Ether Blend Oxygen Content:	0.021	Alcohol Blend Oxygen Content:	0.000								
		Alcohol Blend RVP Waiver:	No								
Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh	
VMT Distribution:	0.5031	0.3422	0.1154		0.0105	0.0010	0.0018	0.0250	0.0009	1.0000	
<hr/>											
Composite Emission Factors (g/mi):											
Composite VOC :	0.876	0.872	0.883	0.875	0.742	0.608	0.542	0.346	2.20	0.861	
Composite CO :	13.24	13.97	13.91	13.95	8.81	1.549	0.952	1.831	9.98	13.197	
Composite NOX :	0.893	1.026	1.175	1.063	4.637	1.553	1.248	11.904	1.15	1.287	
<hr/>											
* # # # # # # # # # # # # # # # # #											
* CHESTERFIELD COUNTY, ROADSCC 270, 26.35 MPH											
* File 1, Run 1, Scenario 7.											
* # # # # # # # # # # # # # # # # #											
M615 Comment:											
User supplied VMT mix.											
M583 Warning:											
The user supplied arterial average speed of 26.4											
will be used for all hours of the day. 100% of VMT											
has been assigned to the arterial/collector roadway											
type for all hours of the day and all vehicle types.											
* Reading PM Gas Carbon ZML Levels											
* from the external data file PMGZML.CSV											
* Reading PM Gas Carbon DR1 Levels											
* from the external data file PMGDR1.CSV											
* Reading PM Gas Carbon DR2 Levels											
* from the external data file PMGDR2.CSV											
* Reading PM Diesel Zero Mile Levels											
* from the external data file PMDZML.CSV											
* Reading the First PM Deterioration Rates											
* from the external data file PMDDR1.CSV											
* Reading the Second PM Deterioration Rates											
* from the external data file PMDDR2.CSV											
M 48 Warning:											
there are no sales for vehicle class HDGV8b											
LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D											
Calendar Year: 2005											
Month: July											
Altitude: Low											
Minimum Temperature: 71.5 (F)											
Maximum Temperature: 92.9 (F)											
Minimum Rel. Hum.: 44.2 (%)											
Maximum Rel. Hum.: 91.6 (%)											
Barometric Pressure: 30.02 (inches Hg)											
Nominal Fuel RVP: 6.8 psi											
Weathered RVP: 6.5 psi											
Fuel Sulfur Content: 90. ppm											
Exhaust I/M Program:	No										
Evap I/M Program:	No										
ATP Program:	No										
Reformulated Gas:	No										
Ether Blend Market Share:	1.000	Alcohol Blend Market Share:	0.000								
Ether Blend Oxygen Content:	0.021	Alcohol Blend Oxygen Content:	0.000								
		Alcohol Blend RVP Waiver:	No								
Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh	
VMT Distribution:	0.4989	0.3393	0.1144		0.0125	0.0010	0.0018	0.0296	0.0025	1.0000	
<hr/>											
Composite Emission Factors (g/mi):											
Composite VOC :	1.020	1.010	1.025	1.014	1.159	0.779	0.721	0.565	2.64	1.009	

Table 4.2-6
Sample Mobile 6.2 Output File

- * Reading PM Gas Carbon DRL Levels
- * from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

- * Reading the First PM Deterioration Rates
- * from the external data file PMDDR1.CSV

- * Reading the Second PM Deterioration Rates
- * from the external data file PMDDR2.CSV

there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
Calendar Year: 2005
Month: July
Altitude: Low
Minimum Temperature: 71.5 (F)
Maximum Temperature: 92.9 (F)
Minimum Rel. Hum.: 44.2 (%)
Maximum Rel. Hum.: 91.6 (%)
Barometric Pressure: 30.02 (inches Hg)
Nominal Fuel RVP: 6.8 psi
Weathered RVP: 6.5 psi
Fuel Sulfur Content: 90. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

Composite VOC :	1.035	1.024	1.039	1.028	1.207	0.797	0.739	0.587	2.69	1.026
Composite CO :	10.45	11.35	11.49	11.38	12.54	1.896	1.201	2.910	15.77	10.657
Composite NOX :	0.933	1.021	1.180	1.061	3.837	1.345	1.078	9.191	0.94	1.287

* Reading Hourly Roadway VMT distribution from the following external
* data file: C:\MORTLE62\RICHMOND\LOCAL.TXT

Reading User Supplied ROADWAY VMT Factors

- * Reading PM Gas Carbon ZML Levels
- * from the external data file PMGZML.CSV

- * Reading PM Gas Carbon DR1 Levels
- * from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:

there are no sales for vehicle

there are no sales for vehicle class HDGV8b

Table 4.2-6
Sample Mobile 6.2 Output File

Table 4.2-6
Sample Mobile 6.2 Output File

will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

- * Reading PM Gas Carbon ZML Levels
- * from the external data file PMGZML.CSV
- * Reading PM Gas Carbon DR1 Levels
- * from the external data file PMGDR1.CSV
- * Reading PM Gas Carbon DR2 Levels
- * from the external data file PMGDR2.CSV
- * Reading PM Diesel Zero Mile Levels
- * from the external data file PMDZML.CSV
- * Reading the First PM Deterioration Rates
- * from the external data file PMDDR1.CSV
- * Reading the Second PM Deterioration Rates
- * from the external data file PMDDR2.CSV

M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
 Calendar Year: 2005
 Month: July
 Altitude: Low
 Minimum Temperature: 71.5 (F)
 Maximum Temperature: 92.9 (F)
 Minimum Rel. Hum.: 44.2 (%)
 Maximum Rel. Hum.: 91.6 (%)
 Barometric Pressure: 30.02 (inches Hg)
 Nominal Fuel RVP: 6.8 psi
 Weathered RVP: 6.5 psi
 Fuel Sulfur Content: 90. ppm

Exhaust I/M Program: No
 Evap I/M Program: No
 ATP Program: No
 Reformulated Gas: No

Ether Blend Market Share: 1.000	Alcohol Blend Market Share: 0.000
Ether Blend Oxygen Content: 0.021	Alcohol Blend Oxygen Content: 0.000
Alcohol Blend RVP Waiver: No	

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
GVWR:	<6000	>6000	(All)							
VMT Distribution:	0.4723	0.3213	0.1084		0.0279	0.0010	0.0018	0.0656	0.0017	1.0000

Composite Emission Factors (g/mi):										
Composite VOC :	1.025	1.041	1.045	1.042	0.864	0.660	0.612	0.363	2.19	0.985
Composite CO :	14.19	15.37	15.33	15.36	9.93	1.629	1.066	1.913	9.95	13.725
Composite NOX :	0.966	1.105	1.250	1.142	4.841	1.649	1.323	12.244	1.14	1.891

- * #
- * COLONIAL HEIGHTS CITY, ROADSCC 270, 18.51 MPH
- * File 1, Run 2, Scenario 2.
- * #
- M615 Comment:
User supplied VMT mix.

M583 Warning:

The user supplied arterial average speed of 18.5 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

- * Reading PM Gas Carbon ZML Levels
- * from the external data file PMGZML.CSV
- * Reading PM Gas Carbon DR1 Levels
- * from the external data file PMGDR1.CSV
- * Reading PM Gas Carbon DR2 Levels
- * from the external data file PMGDR2.CSV
- * Reading PM Diesel Zero Mile Levels
- * from the external data file PMDZML.CSV
- * Reading the First PM Deterioration Rates

Table 4.2-6
Sample Mobile 6.2 Output File

```

* from the external data file PMDDR1.CSV
* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July
            Altitude: Low
                Minimum Temperature: 71.5 (F)
                Maximum Temperature: 92.9 (F)
                    Minimum Rel. Hum.: 44.2 (%)
                    Maximum Rel. Hum.: 91.6 (%)
                    Barometric Pressure: 30.02 (inches Hg)
                        Nominal Fuel RVP: 6.8 psi
                            Weathered RVP: 6.5 psi
                            Fuel Sulfur Content: 90. ppm

Exhaust I/M Program: No
    Evap I/M Program: No
        ATP Program: No
        Reformulated Gas: No

Ether Blend Market Share: 1.000      Alcohol Blend Market Share: 0.000
Ether Blend Oxygen Content: 0.021    Alcohol Blend Oxygen Content: 0.000
                                    Alcohol Blend RVP Waiver: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh
    GVWR: <6000 >6000 (All) -----
VMT Distribution: 0.4987 0.3393 0.1144 0.0126 0.0011 0.0018 0.0295 0.0025 1.0000
-----
Composite Emission Factors (g/mi):
    Composite VOC : 1.371 1.375 1.392 1.379 1.821 0.991 0.959 0.775 3.02 1.366
    Composite CO : 12.13 13.27 13.53 13.34 19.79 2.346 1.601 4.189 20.07 12.529
    Composite NOX : 1.126 1.199 1.365 1.241 3.800 1.601 1.283 10.572 0.88 1.491
-----

* # # # # # # # # # # # # # # # # #
* COLONIAL HEIGHTS CITY, ROADSCC 290, 20.75 MPH
* File 1, Run 2, Scenario 3.
* # # # # # # # # # # # # # # # # #
M615 Comment:
    User supplied VMT mix.

M583 Warning:
    The user supplied arterial average speed of 20.8
    will be used for all hours of the day. 100% of VMT
    has been assigned to the arterial/collector roadway
    type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDRL.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July
            Altitude: Low
                Minimum Temperature: 71.5 (F)
                Maximum Temperature: 92.9 (F)
                    Minimum Rel. Hum.: 44.2 (%)
                    Maximum Rel. Hum.: 91.6 (%)
                    Barometric Pressure: 30.02 (inches Hg)
                        Nominal Fuel RVP: 6.8 psi
                            Weathered RVP: 6.5 psi
                            Fuel Sulfur Content: 90. ppm

```

Table 4.2-6
Sample Mobile 6.2 Output File

Exhaust I/M Program: No
 Evap I/M Program: No
 ATP Program: No
 Reformulated Gas: No

Ether Blend Market Share: 1.000 Alcohol Blend Market Share: 0.000
 Ether Blend Oxygen Content: 0.021 Alcohol Blend Oxygen Content: 0.000
 Alcohohol Blend RVP Waiver: No

Vehicle Type: GVWR:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4980	0.3388	0.1143		0.0128	0.0011	0.0018	0.0300	0.0033	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	1.305	1.310	1.324	1.313	1.648	0.943	0.908	0.715	2.88	1.299
Composite CO :	11.74	12.94	13.17	13.00	17.55	2.204	1.495	3.737	18.31	12.136
Composite NOX :	1.080	1.160	1.322	1.201	3.871	1.537	1.232	10.147	0.90	1.443

* #
 * COLONIAL HEIGHTS CITY, ROADSCC 310, 17.99 MPH
 * File 1, Run 2, Scenario 4.
 * #
 M615 Comment:
 User supplied VMT mix.

M583 Warning:
 The user supplied arterial average speed of 18.0
 will be used for all hours of the day. 100% of VMT
 has been assigned to the arterial/collector roadway
 type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
 * from the external data file PMGZML.CSV

* Reading PM Gas Carbon DRL Levels
 * from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
 * from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
 * from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
 * from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
 * from the external data file PMDDR2.CSV

M 48 Warning:
 there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
 Calendar Year: 2005
 Month: July
 Altitude: Low
 Minimum Temperature: 71.5 (F)
 Maximum Temperature: 92.9 (F)
 Minimum Rel. Hum.: 44.2 (%)
 Maximum Rel. Hum.: 91.6 (%)
 Barometric Pressure: 30.02 (inches Hg)
 Nominal Fuel RVP: 6.8 psi
 Weathered RVP: 6.5 psi
 Fuel Sulfur Content: 90. ppm

Exhaust I/M Program: No
 Evap I/M Program: No
 ATP Program: No
 Reformulated Gas: No

Ether Blend Market Share: 1.000 Alcohol Blend Market Share: 0.000
 Ether Blend Oxygen Content: 0.021 Alcohol Blend Oxygen Content: 0.000
 Alcohohol Blend RVP Waiver: No

Vehicle Type: GVWR:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4970	0.3381	0.1141		0.0132	0.0011	0.0018	0.0311	0.0035	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	1.389	1.393	1.411	1.398	1.867	1.003	0.971	0.790	3.06	1.385
Composite CO :	12.25	13.38	13.64	13.44	20.38	2.383	1.629	4.306	20.54	12.650

Table 4.2-6
Sample Mobile 6.2 Output File

Composite NOX :	1.138	1.209	1.377	1.252	3.784	1.617	1.297	10.681	0.87	1.521
* #										
* COLONIAL HEIGHTS CITY, ROADSCC 330, 12.9 MPH										
* File 1, Run 2, Scenario 5.										
* #										
M615 Comment:										
User supplied VMT mix.										
* Reading Hourly Roadway VMT distribution from the following external										
* data file: C:\MOBILE62\RICHMOND\LOCAL.TXT										
Reading User Supplied ROADWAY VMT Factors										
* Reading PM Gas Carbon ZML Levels										
* from the external data file PMGZML.CSV										
* Reading PM Gas Carbon DR1 Levels										
* from the external data file PMGDR1.CSV										
* Reading PM Gas Carbon DR2 Levels										
* from the external data file PMGDR2.CSV										
* Reading PM Diesel Zero Mile Levels										
* from the external data file PMDZML.CSV										
* Reading the First PM Deterioration Rates										
* from the external data file PMDDR1.CSV										
* Reading the Second PM Deterioration Rates										
* from the external data file PMDDR2.CSV										
M 48 Warning:										
there are no sales for vehicle class HDGV8b										
LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D										
Calendar Year: 2005										
Month: July										
Altitude: Low										
Minimum Temperature: 71.5 (F)										
Maximum Temperature: 92.9 (F)										
Minimum Rel. Hum.: 44.2 (%)										
Maximum Rel. Hum.: 91.6 (%)										
Barometric Pressure: 30.02 (inches Hg)										
Nominal Fuel RVP: 6.8 psi										
Weathered RVP: 6.5 psi										
Fuel Sulfur Content: 90. ppm										
Exhaust I/M Program: No										
Evap I/M Program: No										
ATP Program: No										
Reformulated Gas: No										
Ether Blend Market Share: 1.000										
Ether Blend Oxygen Content: 0.021										
Alcohol Blend Market Share: 0.000										
Alcohol Blend Oxygen Content: 0.000										
Alcohol Blend RVP Waiver: No										
Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh										
GVWR: <6000 >6000 (All)										
VMT Distribution: 0.4969 0.3380 0.1140 0.0126 0.0011 0.0018 0.0296 0.0059 1.0000										
Composite Emission Factors (g/mi):										
Composite VOC : 1.597 1.603 1.630 1.610 2.483 1.157 1.133 0.981 3.59 1.606										
Composite CO : 9.86 12.27 12.64 12.36 28.32 2.875 1.995 5.865 27.27 11.185										
Composite NOX : 0.976 1.030 1.187 1.070 3.601 1.836 1.475 11.117 0.83 1.353										

* MOBILE6.2.03 (24-Sep-2003) *										
* Input file: C:\02SIP\RICHMOND\TEST\RICH05.IN (file 1, run 3). *										

* Reading Registration Distributions from the following external										
* data file: C:\MOBILE62\RICHMOND\2005\HANOV05.RDT										
M 49 Warning:										
1.00 MYR sum not = 1. (will normalize)										
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)										
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)										
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)										
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)										
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)										

Table 4.2-6
Sample Mobile 6.2 Output File

```

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
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M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
M603 Comment: User has disabled the calculation of REFUELING emissions.

* Reading 94+ LEV IMPLEMENTATION SCHEDULE from the following external
* data file: C:\MOBILE62\RICHMOND\NLEVNE.D
M616 Comment:
    User has supplied post-1999 sulfur levels.

* # # # # # # # # # # # # # # # #
* HANOVER COUNTY, ROADSCC 110, 60.56 MPH
* File 1, Run 3, Scenario 1.
* # # # # # # # # # # # # # # # #
M615 Comment:
    User supplied VMT mix.

M582 Warning:
    The user supplied freeway average speed of 60.6
    will be used for all hours of the day. 100% of VMT
    has been assigned to a fixed combination of freeways
    and freeway ramps for all hours of the day and all
    vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July
            Altitude: Low
    Minimum Temperature: 71.5 (F)
    Maximum Temperature: 92.9 (F)
        Minimum Rel. Hum.: 44.2 (%)
        Maximum Rel. Hum.: 91.6 (%)
    Barometric Pressure: 30.02 (inches Hg)
        Nominal Fuel RVP: 6.8 psi
        Weathered RVP: 6.5 psi
    Fuel Sulfur Content: 90. ppm

    Exhaust I/M Program: No
        Evap I/M Program: No
            ATP Program: No
            Reformulated Gas: No

Ether Blend Market Share: 1.000      Alcohol Blend Market Share: 0.000
Ether Blend Oxygen Content: 0.021    Alcohol Blend Oxygen Content: 0.000
                                    Alcohol Blend RVP Waiver: No

```

Table 4.2-6
Sample Mobile 6.2 Output File

Vehicle Type: GVWR:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4314	0.2936	0.0990		0.0506	0.0010	0.0016	0.1201	0.0027	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	0.897	0.895	0.909	0.898	0.710	0.658	0.565	0.332	2.85	0.825
Composite CO :	15.35	16.12	16.08	16.11	12.66	1.801	1.120	2.295	23.23	13.927
Composite NOX :	0.950	1.098	1.249	1.136	5.059	2.553	1.961	17.560	1.43	3.230

* # # # # # # # # # # # # # # # # # # #

* HANOVER COUNTY, ROADSCC 130, 54.18 MPH

* File 1, Run 3, Scenario 2.

* # # # # # # # # # # # # # # # # # # #

M615 Comment:

User supplied VMT mix.

M582 Warning:

The user supplied freeway average speed of 54.2 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels

* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels

* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels

* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels

* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates

* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates

* from the external data file PMDDR2.CSV

M 48 Warning:

there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

Calendar Year: 2005

Month: July

Altitude: Low

Minimum Temperature: 71.5 (F)

Maximum Temperature: 92.9 (F)

Minimum Rel. Hum.: 44.2 (%)

Maximum Rel. Hum.: 91.6 (%)

Barometric Pressure: 30.02 (inches Hg)

Nominal Fuel RVP: 6.8 psi

Weathered RVP: 6.5 psi

Fuel Sulfur Content: 90. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Ether Blend Market Share: 1.000 Alcohol Blend Market Share: 0.000

Ether Blend Oxygen Content: 0.021 Alcohol Blend Oxygen Content: 0.000

Alcohol Blend RVP Waiver: No

Vehicle Type: GVWR:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4541	0.3090	0.1042		0.0379	0.0011	0.0017	0.0898	0.0022	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	0.919	0.918	0.934	0.922	0.719	0.662	0.568	0.336	2.35	0.862
Composite CO :	14.38	15.18	15.18	15.18	9.83	1.691	1.041	1.961	12.83	13.384
Composite NOX :	0.931	1.070	1.221	1.108	4.828	1.962	1.501	13.783	1.27	2.309

* # # # # # # # # # # # # # # # # # # #

* HANOVER COUNTY, ROADSCC 150, 45.45 MPH

* File 1, Run 3, Scenario 3.

* # # # # # # # # # # # # # # # # # # #

M615 Comment:

User supplied VMT mix.

M583 Warning:

Table 4.2-6
Sample Mobile 6.2 Output File

The user supplied arterial average speed of 45.5 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

- * Reading PM Gas Carbon ZML Levels
 - * from the external data file PMGZML.CSV
 - * Reading PM Gas Carbon DR1 Levels
 - * from the external data file PMGDR1.CSV
 - * Reading PM Gas Carbon DR2 Levels
 - * from the external data file PMGDR2.CSV
 - * Reading PM Diesel Zero Mile Levels
 - * from the external data file PMDZML.CSV
 - * Reading the First PM Deterioration Rates
 - * from the external data file PMDDR1.CSV
 - * Reading the Second PM Deterioration Rates
 - * from the external data file PMDDR2.CSV
- M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

Calendar Year: 2005

Month: July

Altitude: Low

Minimum Temperature: 71.5 (F)

Maximum Temperature: 92.9 (F)

Minimum Rel. Hum.: 44.2 (%)

Maximum Rel. Hum.: 91.6 (%)

Barometric Pressure: 30.02 (inches Hg)

Nominal Fuel RVP: 6.8 psi

Weathered RVP: 6.5 psi

Fuel Sulfur Content: 90. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Ether Blend Market Share: 1.000	Alcohol Blend Market Share: 0.000
Ether Blend Oxygen Content: 0.021	Alcohol Blend Oxygen Content: 0.000
Alcohol Blend RVP Waiver: No	

Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

VMT Distribution:	0.4815	0.3276	0.1105	0.0222	0.0011	0.0018	0.0526	0.0027	1.0000
-------------------	--------	--------	--------	--------	--------	--------	--------	--------	--------

Composite Emission Factors (g/mi):

Composite VOC :	0.949	0.948	0.966	0.953	0.773	0.686	0.592	0.365	2.22	0.919
Composite CO :	12.39	13.44	13.54	13.47	8.27	1.645	1.008	1.820	10.11	12.175
Composite NOX :	0.893	1.015	1.166	1.053	4.511	1.526	1.163	9.679	1.08	1.507

* # # # # # # # # # # # # # # # # # #
* HANOVER COUNTY, ROADSCC 170, 39.83 MPH

* File 1, Run 3, Scenario 4.

* # # # # # # # # # # # # # # # # #
M615 Comment:
User supplied VMT mix.

M583 Warning:

The user supplied arterial average speed of 39.8 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

- * Reading PM Gas Carbon ZML Levels
- * from the external data file PMGZML.CSV

- * Reading PM Gas Carbon DR1 Levels
- * from the external data file PMGDR1.CSV

- * Reading PM Gas Carbon DR2 Levels
- * from the external data file PMGDR2.CSV

- * Reading PM Diesel Zero Mile Levels
- * from the external data file PMDZML.CSV

- * Reading the First PM Deterioration Rates
- * from the external data file PMDDR1.CSV

Table 4.2-6
Sample Mobile 6.2 Output File

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV

M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
Calendar Year: 2005
Month: July
Altitude: Low
Minimum Temperature: 71.5 (F)
Maximum Temperature: 92.9 (F)
Minimum Rel. Hum.: 44.2 (%)
Maximum Rel. Hum.: 91.6 (%)
Barometric Pressure: 30.02 (inches Hg)
Nominal Fuel RVP: 6.8 psi
Weathered RVP: 6.5 psi
Fuel Sulfur Content: 90. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

Ether Blend Market Share: 1.000 Alcohol Blend Market Share: 0.000
Ether Blend Oxygen Content: 0.021 Alcohol Blend Oxygen Content: 0.000
Alcohol Blend RVP Waiver: No

Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4786	0.3257	0.1098		0.0234	0.0011	0.0018	0.0556	0.0039	1.0000

Composite Emission Factors (g/mi):										
Composite VOC :	0.976	0.974	0.992	0.979	0.838	0.717	0.623	0.402	2.28	0.946
Composite CO :	11.62	12.70	12.83	12.73	8.45	1.680	1.033	1.927	10.90	11.461
Composite NOX :	0.882	0.995	1.147	1.033	4.328	1.427	1.086	9.044	1.05	1.484

* # # # # # # # # # # # # # # # # # #
* HANOVER COUNTY, ROADSCC 190, 35.38 MPH
* File 1, Run 3, Scenario 5.
* # # # # # # # # # # # # # # # # # #
M615 Comment:

User supplied VMT mix.

M583 Warning:
The user supplied arterial average speed of 35.4
will be used for all hours of the day. 100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDRL.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV

M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
Calendar Year: 2005
Month: July
Altitude: Low
Minimum Temperature: 71.5 (F)
Maximum Temperature: 92.9 (F)
Minimum Rel. Hum.: 44.2 (%)
Maximum Rel. Hum.: 91.6 (%)
Barometric Pressure: 30.02 (inches Hg)
Nominal Fuel RVP: 6.8 psi
Weathered RVP: 6.5 psi
Fuel Sulfur Content: 90. ppm

Table 4.2-6
Sample Mobile 6.2 Output File

Exhaust I/M Program: No
 Evap I/M Program: No
 ATP Program: No
 Reformulated Gas: No

Ether Blend Market Share: 1.000 Alcohol Blend Market Share: 0.000
 Ether Blend Oxygen Content: 0.021 Alcohol Blend Oxygen Content: 0.000
 Alcohol Blend RVP Waiver: No

Vehicle Type: GVWR:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4855	0.3304	0.1114		0.0188	0.0012	0.0018	0.0446	0.0063	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	1.001	0.997	1.016	1.002	0.911	0.752	0.658	0.444	2.37	0.983
Composite CO :	11.02	12.12	12.27	12.16	9.05	1.738	1.075	2.103	11.91	11.068
Composite NOX :	0.877	0.984	1.138	1.023	4.184	1.397	1.062	8.852	1.03	1.361

* # # # # # # # # # # # # # # # # #
 * HANOVER COUNTY, ROADSCC 210, 25 MPH
 * File 1, Run 3, Scenario 6.
 * # # # # # # # # # # # # # # # # #
 M615 Comment:
 User supplied VMT mix.

M583 Warning:
 The user supplied arterial average speed of 25.0
 will be used for all hours of the day. 100% of VMT
 has been assigned to the arterial/collector roadway
 type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
 * from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
 * from the external data file PMGDRL.CSV

* Reading PM Gas Carbon DR2 Levels
 * from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
 * from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
 * from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
 * from the external data file PMDDR2.CSV

M 48 Warning:
 there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
 Calendar Year: 2005
 Month: July
 Altitude: Low
 Minimum Temperature: 71.5 (F)
 Maximum Temperature: 92.9 (F)
 Minimum Rel. Hum.: 44.2 (%)
 Maximum Rel. Hum.: 91.6 (%)
 Barometric Pressure: 30.02 (inches Hg)
 Nominal Fuel RVP: 6.8 psi
 Weathered RVP: 6.5 psi
 Fuel Sulfur Content: 90. ppm

Exhaust I/M Program: No
 Evap I/M Program: No
 ATP Program: No
 Reformulated Gas: No

Ether Blend Market Share: 1.000 Alcohol Blend Market Share: 0.000
 Ether Blend Oxygen Content: 0.021 Alcohol Blend Oxygen Content: 0.000
 Alcohol Blend RVP Waiver: No

Vehicle Type: GVWR:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.5021	0.3417	0.1152		0.0100	0.0012	0.0019	0.0237	0.0043	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	1.112	1.104	1.127	1.110	1.214	0.880	0.785	0.596	2.71	1.106
Composite CO :	10.85	11.83	12.06	11.89	12.54	2.020	1.277	2.961	15.90	11.151
Composite NOX :	0.962	1.047	1.209	1.088	3.847	1.465	1.116	9.288	0.94	1.246

Table 4.2-6
Sample Mobile 6.2 Output File

```

* # # # # # # # # # # # # # # # # # #
* HANOVER COUNTY, ROADSCC 230, 60.19 MPH
* File 1, Run 3, Scenario 7.
* # # # # # # # # # # # # # # # # # #
M615 Comment:
    User supplied VMT mix.
M582 Warning:
    The user supplied freeway average speed of 60.2
    will be used for all hours of the day. 100% of VMT
    has been assigned to a fixed combination of freeways
    and freeway ramps for all hours of the day and all
    vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDRL.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDRL2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July
            Altitude: Low
        Minimum Temperature: 71.5 (F)
        Maximum Temperature: 92.9 (F)
        Minimum Rel. Hum.: 44.2 (%)
        Maximum Rel. Hum.: 91.6 (%)
        Barometric Pressure: 30.02 (inches Hg)
        Nominal Fuel RVP: 6.8 psi
        Weathered RVP: 6.5 psi
        Fuel Sulfur Content: 90. ppm

    Exhaust I/M Program: No
        Evap I/M Program: No
        ATP Program: No
        Reformulated Gas: No

Ether Blend Market Share: 1.000      Alcohol Blend Market Share: 0.000
Ether Blend Oxygen Content: 0.021    Alcohol Blend Oxygen Content: 0.000
                                    Alcohol Blend RVP Waiver: No

    Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh
    GVWR: <6000 >6000 (All)          <----->
    VMT Distribution: 0.4722 0.3213 0.1084 0.0277 0.0011 0.0017 0.0658 0.0017 1.0000
-----
```

Composite Emission Factors (g/mi):										
Composite VOC :	0.899	0.896	0.910	0.900	0.710	0.658	0.565	0.332	2.82	0.859
Composite CO :	15.29	16.06	16.03	16.06	12.47	1.794	1.115	2.273	22.65	14.659
Composite NOX :	0.949	1.097	1.247	1.135	5.046	2.516	1.932	17.321	1.42	2.224

```

* # # # # # # # # # # # # # # # #
* HANOVER COUNTY, ROADSCC 270, 30.69 MPH
* File 1, Run 3, Scenario 8.
* # # # # # # # # # # # # # # # #
M615 Comment:
    User supplied VMT mix.
M583 Warning:
    The user supplied arterial average speed of 30.7
    will be used for all hours of the day. 100% of VMT
    has been assigned to the arterial/collector roadway
    type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDRL.CSV

```


Table 4.2-6
Sample Mobile 6.2 Output File

Minimum Temperature:	71.5 (F)										
Maximum Temperature:	92.9 (F)										
Minimum Rel. Hum.:	44.2 (%)										
Maximum Rel. Hum.:	91.6 (%)										
Barometric Pressure:	30.02 (inches Hg)										
Nominal Fuel RVP:	6.8 psi										
Weathered RVP:	6.5 psi										
Fuel Sulfur Content:	90. ppm										
Exhaust I/M Program:	No										
Evap I/M Program:	No										
ATP Program:	No										
Reformulated Gas:	No										
Ether Blend Market Share:	1.000	Alcohol Blend Market Share:	0.000								
Ether Blend Oxygen Content:	0.021	Alcohol Blend Oxygen Content:	0.000								
		Alcohol Blend RVP Waiver:	No								
Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	
GVWR:	<6000		>6000	(All)							
VMT Distribution:	0.4979	0.3388	0.1142		0.0127	0.0012	0.0018	0.0301	0.0033	1.0000	
<hr/>											
Composite Emission Factors (g/mi):											
Composite VOC :	1.052	1.048	1.070	1.054	1.040	0.809	0.715	0.512	2.53	1.040	
Composite CO :	10.75	11.81	11.99	11.85	10.42	1.853	1.157	2.454	13.69	10.980	
Composite NOX :	0.909	1.004	1.159	1.043	4.007	1.406	1.070	8.912	0.99	1.251	
<hr/>											
* # # # # # # # # # # # # # # # # # # #											
* HANOVER COUNTY, ROADSCC 310, 32.59 MPH											
* File 1, Run 3, Scenario 10.											
* # # # # # # # # # # # # # # # # # # #											
M615 Comment:											
User supplied VMT mix.											
M583 Warning:											
The user supplied arterial average speed of 32.6											
will be used for all hours of the day. 100% of VMT											
has been assigned to the arterial/collector roadway											
type for all hours of the day and all vehicle types.											
* Reading PM Gas Carbon ZML Levels											
* from the external data file PMGZML.CSV											
* Reading PM Gas Carbon DR1 Levels											
* from the external data file PMGDR1.CSV											
* Reading PM Gas Carbon DR2 Levels											
* from the external data file PMGDR2.CSV											
* Reading PM Diesel Zero Mile Levels											
* from the external data file PMDZML.CSV											
* Reading the First PM Deterioration Rates											
* from the external data file PMDDR1.CSV											
* Reading the Second PM Deterioration Rates											
* from the external data file PMDDR2.CSV											
M 48 Warning:											
there are no sales for vehicle class HDGV8b											
LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D											
Calendar Year: 2005											
Month: July											
Altitude: Low											
Minimum Temperature: 71.5 (F)											
Maximum Temperature: 92.9 (F)											
Minimum Rel. Hum.: 44.2 (%)											
Maximum Rel. Hum.: 91.6 (%)											
Barometric Pressure: 30.02 (inches Hg)											
Nominal Fuel RVP: 6.8 psi											
Weathered RVP: 6.5 psi											
Fuel Sulfur Content: 90. ppm											
Exhaust I/M Program: No											
Evap I/M Program: No											
ATP Program: No											
Reformulated Gas: No											
Ether Blend Market Share: 1.000	Alcohol Blend Market Share:	0.000									
Ether Blend Oxygen Content: 0.021	Alcohol Blend Oxygen Content:	0.000									
	Alcohol Blend RVP Waiver:	No									

Table 4.2-6
Sample Mobile 6.2 Output File

Vehicle Type: GVWR:	LDGV <6000	LDGT12 >6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4970	0.3382	0.1140		0.0131	0.0012	0.0018	0.0312	0.0035	1.0000
Composite Emission Factors (g/mi):										
Composite VOC :	1.025	1.021	1.041	1.026	0.972	0.779	0.685	0.476	2.45	1.012
Composite CO :	10.87	11.95	12.11	11.99	9.68	1.792	1.113	2.266	12.75	11.073
Composite NOX :	0.891	0.992	1.147	1.031	4.099	1.399	1.064	8.865	1.01	1.246

* # # # # # # # # # # # # # # # # # #
* HANOVER COUNTY, ROADSCC 330, 12.9 MPH
* File 1, Run 3, Scenario 11.
* # # # # # # # # # # # # # # # # # #
M615 Comment:
User supplied VMT mix

* Reading Hourly Roadway VMT distribution from the following external
* data file: C:\MOBILE62\RICHMOND\LOCAL.TXT

Reading User Supplied ROADWAY VMT Factors

- * Reading PM Gas Carbon ZML Levels
- * from the external data file PMGZML.CSV

* Reading PM Gas Carbon DRL Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file RMGDR2.CSV

* Reading PM Diesel Zero Mile Levels

* from the external data file PMDZML.CSV

- * Reading the First PM Deterioration Rates
- * from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Ra

* from the external data file PMDDR2.CSV
M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
Calendar Year: 2005
Month: July
Altitude: Low
Minimum Temperature: 71.5 (F)
Maximum Temperature: 92.9 (F)
 Minimum Rel. Hum.: 44.2 (%)
 Maximum Rel. Hum.: 91.6 (%)
Barometric Pressure: 30.02 (inches Hg)
 Nominal Fuel RVP: 6.8 psi
 Weathered RVP: 6.5 psi
Fuel Sulfur Content: 90. ppm

Vehicle Type: GVWR:	LDGV <6000	LDGT12 >6000	LDGT34 (All)	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4968	0.3380	0.1140		0.0125	0.0012	0.0018	0.0297	0.0059	1.0000

Composite VOC : 1 455

Composite VOC :	1.435	1.440	1.491	1.455	2.165	1.170	1.079	0.949	3.04	1.462
Composite CO :	9.38	11.38	11.78	11.48	24.79	2.905	1.911	5.657	27.44	10.498
Composite NOX :	0.924	0.976	1.139	1.017	3.454	1.860	1.422	10.813	0.84	1.293

```
*****  
* MOBILE6.2.03 (24-Sep-2003) *  
* Input file: C:\025IP\RICHMOND\TEST\RICH05.IN (file 1, run 4). *  
*****
```

* Reading Registration Distributions from the following external
* data file: C:\MOBILE62\RICHMOND\2005\HENRI05.RDT
M 49 Warning:

1.00 MYR sum not = 1. (will normalize)

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Table 4.2-6
Sample Mobile 6.2 Output File

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
M603 Comment:
User has disabled the calculation of REFUELING emissions.

* Reading 94+ LEV IMPLEMENTATION SCHEDULE from the following external
* data file: C:\MOBILE62\RICHMOND\NLEVNE.D
M616 Comment:
User has supplied post-1999 sulfur levels.

* # # # # # # # # # # # # # # # # # # #
* HENRICO COUNTY, ROADSCC 110, 62.59 MPH
* File 1, Run 4, Scenario 1.
* # # # # # # # # # # # # # # # # # # #
M615 Comment:
User supplied VMT mix.
M515 Warning:
The combined freeway and ramp average speed entered
cannot be greater than 60.7 miles per hour.
The average speed will be reset to this value.
M582 Warning:
The user supplied freeway average speed of 60.7
will be used for all hours of the day. 100% of VMT
has been assigned to a fixed combination of freeways
and freeway ramps for all hours of the day and all
vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
Calendar Year: 2005
Month: July
Altitude: Low
Minimum Temperature: 71.5 (F)
Maximum Temperature: 92.9 (F)
Minimum Rel. Hum.: 44.2 (%)
Maximum Rel. Hum.: 91.6 (%)
Barometric Pressure: 30.02 (inches Hg)
Nominal Fuel RVP: 6.8 psi
Weathered RVP: 6.5 psi
Fuel Sulfur Content: 90. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

Ether Blend Market Share: 1.000 Alcohol Blend Market Share: 0.000
Ether Blend Oxygen Content: 0.021 Alcohol Blend Oxygen Content: 0.000
Alcohol Blend RVP Waiver: No

Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDVV	LDDT	HDDV	MC	All Veh
VW:	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
VMT Distribution:	0.4317	0.2936	0.0990		0.0503	0.0008	0.0016	0.1203	0.0027	1.0000

Composite Emission Factors (g/mi):
Composite VOC : 0.833 0.807 0.816 0.809 0.600 0.565 0.511 0.316 2.87 0.754
Composite CO : 14.84 15.40 15.31 15.38 11.51 1.637 1.022 2.160 23.52 13.350
Composite NOX : 0.922 1.066 1.218 1.104 4.858 2.266 1.890 16.998 1.44 3.130

Table 4.2-6
Sample Mobile 6.2 Output File

```
* # # # # # # # # # # # # # # # # # # # # #
* HENRICO COUNTY, ROADSCC 170, 46.6 MPH
* File 1, Run 4, Scenario 2.
* # # # # # # # # # # # # # # # # # # #
M615 Comment:
    User supplied VMT mix.
```

M583 Warning:
The user supplied arterial average speed of 46.6
will be used for all hours of the day. 100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV

M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

 Calendar Year: 2005

 Month: July

 Altitude: Low

 Minimum Temperature: 71.5 (F)

 Maximum Temperature: 92.9 (F)

 Minimum Rel. Hum.: 44.2 (%)

 Maximum Rel. Hum.: 91.6 (%)

 Barometric Pressure: 30.02 (inches Hg)

 Nominal Fuel RVP: 6.8 psi

 Weathered RVP: 6.5 psi

 Fuel Sulfur Content: 90. ppm

 Exhaust I/M Program: No

 Evap I/M Program: No

 ATP Program: No

 Reformulated Gas: No

Ether Blend Market Share: 1.000 Alcohol Blend Market Share: 0.000
Ether Blend Oxygen Content: 0.021 Alcohol Blend Oxygen Content: 0.000
Alcohol Blend RVP Waiver: No

Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
GVWR:	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
VMT Distribution:	0.4789	0.3257	0.1098		0.0233	0.0008	0.0017	0.0557	0.0039	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	0.876	0.849	0.861	0.852	0.645	0.585	0.532	0.342	2.22	0.835
Composite CO :	12.08	12.91	12.96	12.92	7.53	1.484	0.912	1.702	10.06	11.724
Composite NOX :	0.869	0.987	1.140	1.026	4.365	1.375	1.137	9.527	1.09	1.503

```
* # # # # # # # # # # # # # # # # # # # # #
* HENRICO COUNTY, ROADSCC 230, 54.13 MPH
* File 1, Run 4, Scenario 3.
* # # # # # # # # # # # # # # # # # # #
M615 Comment:
    User supplied VMT mix.
```

M582 Warning:
The user supplied freeway average speed of 54.1
will be used for all hours of the day. 100% of VMT
has been assigned to a fixed combination of freeways
and freeway ramps for all hours of the day and all
vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels

Table 4.2-6
Sample Mobile 6.2 Output File

```

* from the external data file PMGDR1.CSV
* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July
            Altitude: Low
                Minimum Temperature: 71.5 (F)
                Maximum Temperature: 92.9 (F)
                    Minimum Rel. Hum.: 44.2 (%)
                    Maximum Rel. Hum.: 91.6 (%)
                Barometric Pressure: 30.02 (inches Hg)
                    Nominal Fuel RVP: 6.8 psi
                        Weathered RVP: 6.5 psi
                Fuel Sulfur Content: 90. ppm

    Exhaust I/M Program: No
        Evap I/M Program: No
            ATP Program: No
                Reformulated Gas: No

Ether Blend Market Share: 1.000      Alcohol Blend Market Share: 0.000
Ether Blend Oxygen Content: 0.021  Alcohol Blend Oxygen Content: 0.000
                                         Alcohol Blend RVP Waiver: No

    Vehicle Type: LDGV   LDGT12     LDGT34     LDGT      HDGV     LDDV     LDDT      HDDV      MC      All Veh
    GVWR:          -----     -----     <6000     >6000    (All)    -----    -----    -----    -----
    VMT Distribution: 0.4725  0.3213  0.1084      0.0276  0.0008  0.0017  0.0659  0.0017  1.0000

Composite Emission Factors (g/mi):
    Composite VOC : 0.853  0.827  0.838  0.830  0.607  0.568  0.514  0.320  2.36  0.803
    Composite CO : 13.87  14.45  14.40  14.44  8.86  1.529  0.944  1.835  12.77  13.146
    Composite NOX : 0.903  1.037  1.190  1.076  4.630  1.725  1.433  13.224  1.27  1.895
    -----
* # # # # # # # # # # # # # # # #
* HENRICO COUNTY, ROADSCC 270, 25.6 MPH
* File 1, Run 4, Scenario 4.
* # # # # # # # # # # # # # # # #
M615 Comment:
    User supplied VMT mix.
M583 Warning:
    The user supplied arterial average speed of 25.6
    will be used for all hours of the day. 100% of VMT
    has been assigned to the arterial/collector roadway
    type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July

```

Table 4.2-6
Sample Mobile 6.2 Output File

Altitude:	Low										
Minimum Temperature:	71.5 (F)										
Maximum Temperature:	92.9 (F)										
Minimum Rel. Hum.:	44.2 (%)										
Maximum Rel. Hum.:	91.6 (%)										
Barometric Pressure:	30.02 (inches Hg)										
Nominal Fuel RVP:	6.8 psi										
Weathered RVP:	6.5 psi										
Fuel Sulfur Content:	90. ppm										
Exhaust I/M Program:	No										
Evap I/M Program:	No										
ATP Program:	No										
Reformulated Gas:	No										
Ether Blend Market Share:	1.000	Alcohol Blend Market Share:	0.000								
Ether Blend Oxygen Content:	0.021	Alcohol Blend Oxygen Content:	0.000								
Alcohol Blend RVP Waiver: No											
Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh	
VMT Distribution:	0.4990	0.3394	0.1144		0.0124	0.0009	0.0018	0.0297	0.0025	1.0000	
<hr/>											
Composite Emission Factors (g/mi):											
Composite VOC :	1.027	0.989	1.005	0.993	1.022	0.751	0.711	0.556	2.69	1.001	
Composite CO :	10.38	11.15	11.31	11.19	11.05	1.819	1.154	2.707	15.61	10.519	
Composite NOX :	0.926	1.008	1.171	1.049	3.712	1.282	1.059	8.884	0.95	1.253	
<hr/>											
* # # # # # # # # # # # # # # # # # #											
* HENRICO COUNTY, ROADSCC 290, 28.99 MPH											
* File 1, Run 4, Scenario 5.											
* # # # # # # # # # # # # # # # # # #											
M615 Comment:											
User supplied VMT mix.											
M583 Warning:											
The user supplied arterial average speed of 29.0											
will be used for all hours of the day. 100% of VMT											
has been assigned to the arterial/collector roadway											
type for all hours of the day and all vehicle types.											
* Reading PM Gas Carbon ZML Levels											
* from the external data file PMGZML.CSV											
* Reading PM Gas Carbon DR1 Levels											
* from the external data file PMGDR1.CSV											
* Reading PM Gas Carbon DR2 Levels											
* from the external data file PMGDR2.CSV											
* Reading PM Diesel Zero Mile Levels											
* from the external data file PMDZML.CSV											
* Reading the First PM Deterioration Rates											
* from the external data file PMDDR1.CSV											
* Reading the Second PM Deterioration Rates											
* from the external data file PMDDR2.CSV											
M 48 Warning:											
there are no sales for vehicle class HDGV8b											
LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D											
Calendar Year: 2005											
Month: July											
Altitude: Low											
Minimum Temperature: 71.5 (F)											
Maximum Temperature: 92.9 (F)											
Minimum Rel. Hum.: 44.2 (%)											
Maximum Rel. Hum.: 91.6 (%)											
Barometric Pressure: 30.02 (inches Hg)											
Nominal Fuel RVP: 6.8 psi											
Weathered RVP: 6.5 psi											
Fuel Sulfur Content: 90. ppm											
Exhaust I/M Program:	No										
Evap I/M Program:	No										
ATP Program:	No										
Reformulated Gas:	No										
Ether Blend Market Share:	1.000	Alcohol Blend Market Share:	0.000								
Ether Blend Oxygen Content:	0.021	Alcohol Blend Oxygen Content:	0.000								
Alcohol Blend RVP Waiver: No											

Table 4.2-6
Sample Mobile 6.2 Output File

* Reading Hourly Roadway VMT distribution from the following external
 * data file: C:\MOBILE62\RICHMOND\LOCAL.TXT

Reading User Supplied ROADWAY VMT Factors

* Reading PM Gas Carbon ZML Levels
 * from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
 * from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
 * from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
 * from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
 * from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
 * from the external data file PMDDR2.CSV

M 48 Warning:

there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

Calendar Year: 2005

Month: July

Altitude: Low

Minimum Temperature: 71.5 (F)

Maximum Temperature: 92.9 (F)

Minimum Rel. Hum.: 44.2 (%)

Maximum Rel. Hum.: 91.6 (%)

Barometric Pressure: 30.02 (inches Hg)

Nominal Fuel RVP: 6.8 psi

Weathered RVP: 6.5 psi

Fuel Sulfur Content: 90. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Ether Blend Market Share: 1.000 Alcohol Blend Market Share: 0.000

Ether Blend Oxygen Content: 0.021 Alcohol Blend Oxygen Content: 0.000

Ether Blend RVP Waiver: No

Vehicle Type: GWVR:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4971	0.3381	0.1140		0.0125	0.0009	0.0018	0.0298	0.0059	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	1.362	1.314	1.348	1.323	1.882	1.020	1.002	0.901	3.65	1.350
Composite CO :	8.87	10.65	10.97	10.73	22.39	2.683	1.781	5.300	27.47	9.862
Composite NOX :	0.896	0.945	1.110	0.986	3.314	1.639	1.360	10.427	0.84	1.252

 * MOBILE6.2.03 (24-Sep-2003) *

* Input file: C:\02SIP\RICHMOND\TEST\RICH05.IN (file 1, run 5). *

* Reading Registration Distributions from the following external

* data file: C:\MOBILE62\RICHMOND\2005\HOPEW05.RDT

M 49 Warning:

1.00 MYR sum not = 1. (will normalize)

M 49 Warning:

1.00 MYR sum not = 1. (will normalize)

M 49 Warning:

1.00 MYR sum not = 1. (will normalize)

M 49 Warning:

1.00 MYR sum not = 1. (will normalize)

M 49 Warning:

1.00 MYR sum not = 1. (will normalize)

M 49 Warning:

1.00 MYR sum not = 1. (will normalize)

M 49 Warning:

1.00 MYR sum not = 1. (will normalize)

M 49 Warning:

1.00 MYR sum not = 1. (will normalize)

M 49 Warning:

1.00 MYR sum not = 1. (will normalize)

M 49 Warning:

1.00 MYR sum not = 1. (will normalize)

M 49 Warning:

1.00 MYR sum not = 1. (will normalize)

Table 4.2-6
Sample Mobile 6.2 Output File

```

1.00      MYR sum not = 1. (will normalize)
M 49 Warning: 1.00      MYR sum not = 1. (will normalize)
M 49 Warning: 1.00      MYR sum not = 1. (will normalize)
M 49 Warning: 1.00      MYR sum not = 1. (will normalize)
M 49 Warning: 1.00      MYR sum not = 1. (will normalize)
M 49 Warning: 1.00      MYR sum not = 1. (will normalize)
M 49 Warning: 1.00      MYR sum not = 1. (will normalize)
M603 Comment: User has disabled the calculation of REFUELING emissions.

```

* Reading 94+ LEV IMPLEMENTATION SCHEDULE from the following external
 * data file: C:\MOBILE62\RICHMOND\NLEVNE.D

M616 Comment: User has supplied post-1999 sulfur levels.

* # # # # # # # # # # # # # # # # # # #
 * HOPEWELL CITY, ROADSCC 230, 49.0 MPH
 * File 1, Run 5, Scenario 1.
 * # # # # # # # # # # # # # # # # # # #

M615 Comment: User supplied VMT mix.

M582 Warning: The user supplied freeway average speed of 49.0
 will be used for all hours of the day. 100% of VMT
 has been assigned to a fixed combination of freeways
 and freeway ramps for all hours of the day and all
 vehicle types.

* Reading PM Gas Carbon ZML Levels
 * from the external data file PMGZML.CSV

* Reading PM Gas Carbon DRL Levels
 * from the external data file PMGDRL.CSV

* Reading PM Gas Carbon DR2 Levels
 * from the external data file PMGDRL2.CSV

* Reading PM Diesel Zero Mile Levels
 * from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
 * from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
 * from the external data file PMDDR2.CSV

M 48 Warning: there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

Calendar Year: 2005
 Month: July
 Altitude: Low
 Minimum Temperature: 71.5 (F)
 Maximum Temperature: 92.9 (F)
 Minimum Rel. Hum.: 44.2 (%)
 Maximum Rel. Hum.: 91.6 (%)
 Barometric Pressure: 30.02 (inches Hg)
 Nominal Fuel RVP: 6.8 psi
 Weathered RVP: 6.5 psi
 Fuel Sulfur Content: 90. ppm

Exhaust I/M Program: No
 Evap I/M Program: No
 ATP Program: No
 Reformulated Gas: No

Ether Blend Market Share: 1.000 Alcohol Blend Market Share: 0.000
 Ether Blend Oxygen Content: 0.021 Alcohol Blend Oxygen Content: 0.000
 Alchohol Blend RVP Waiver: No

Vehicle Type: GVWR:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4722	0.3212	0.1084		0.0281	0.0011	0.0018	0.0655	0.0017	1.0000

Composite Emission Factors (g/mi):
 Composite VOC : 1.183 1.323 1.337 1.327 1.034 0.689 0.754 0.378 2.24 1.189
 Composite CO : 15.32 17.76 17.87 17.79 11.68 1.674 1.311 2.075 10.05 15.361

Table 4.2-6
Sample Mobile 6.2 Output File

Composite NOX :	1.055	1.233	1.356	1.264	4.822	1.713	1.473	12.472	1.14	2.000
* #										
* HOPEWELL CITY, ROADSCC 270, 16.34 MPH										
* File 1, Run 5, Scenario 2.										
* #										
M615 Comment:										
User supplied VMT mix.										
M583 Warning:										
The user supplied arterial average speed of 16.3										
will be used for all hours of the day. 100% of VMT										
has been assigned to the arterial/collector roadway										
type for all hours of the day and all vehicle types.										
* Reading PM Gas Carbon ZML Levels										
* from the external data file PMGZML.CSV										
* Reading PM Gas Carbon DR1 Levels										
* from the external data file PMGDRL.CSV										
* Reading PM Gas Carbon DR2 Levels										
* from the external data file PMGDRL.CSV										
* Reading PM Diesel Zero Mile Levels										
* from the external data file PMDZML.CSV										
* Reading the First PM Deterioration Rates										
* from the external data file PMDDR1.CSV										
* Reading the Second PM Deterioration Rates										
* from the external data file PMDDR2.CSV										
M 48 Warning:										
there are no sales for vehicle class HDGV8b										
LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D										
Calendar Year: 2005										
Month: July										
Altitude: Low										
Minimum Temperature: 71.5 (F)										
Maximum Temperature: 92.9 (F)										
Minimum Rel. Hum.: 44.2 (%)										
Maximum Rel. Hum.: 91.6 (%)										
Barometric Pressure: 30.02 (inches Hg)										
Nominal Fuel RVP: 6.8 psi										
Weathered RVP: 6.5 psi										
Fuel Sulfur Content: 90. ppm										
Exhaust I/M Program: No										
Evap I/M Program: No										
ATP Program: No										
Reformulated Gas: No										
Ether Blend Market Share: 1.000										
Ether Blend Oxygen Content: 0.021										
Alcohol Blend Market Share: 0.000										
Alcohol Blend Oxygen Content: 0.000										
Alcohol Blend RVP Waiver: No										
Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh										
GVWR: <6000 >6000 (All)										
VMT Distribution: 0.4987 0.3392 0.1145 0.0126 0.0012 0.0019 0.0294 0.0025 1.0000										
Composite Emission Factors (g/mi):										
Composite VOC : 1.685 1.848 1.888 1.858 2.386 1.093 1.212 0.879 3.25 1.751										
Composite CO : 13.85 16.20 16.72 16.33 26.47 2.578 2.042 5.129 22.38 14.864										
Composite NOX : 1.287 1.389 1.537 1.426 3.713 1.743 1.498 11.300 0.86 1.676										
* #										
* HOPEWELL CITY, ROADSCC 290, 17.41 MPH										
* File 1, Run 5, Scenario 3.										
* #										
M615 Comment:										
User supplied VMT mix.										
M583 Warning:										
The user supplied arterial average speed of 17.4										
will be used for all hours of the day. 100% of VMT										
has been assigned to the arterial/collector roadway										
type for all hours of the day and all vehicle types.										
* Reading PM Gas Carbon ZML Levels										
* from the external data file PMGZML.CSV										
* Reading PM Gas Carbon DR1 Levels										

Table 4.2-6
Sample Mobile 6.2 Output File

```

* from the external data file PMGDR1.CSV
* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July
            Altitude: Low
                Minimum Temperature: 71.5 (F)
                Maximum Temperature: 92.9 (F)
                    Minimum Rel. Hum.: 44.2 (%)
                    Maximum Rel. Hum.: 91.6 (%)
                    Barometric Pressure: 30.02 (inches Hg)
                        Nominal Fuel RVP: 6.8 psi
                            Weathered RVP: 6.5 psi
                            Fuel Sulfur Content: 90. ppm

    Exhaust I/M Program: No
        Evap I/M Program: No
            ATP Program: No
            Reformulated Gas: No

Ether Blend Market Share: 1.000      Alcohol Blend Market Share: 0.000
Ether Blend Oxygen Content: 0.021  Alcohol Blend Oxygen Content: 0.000
                                         Alcohol Blend RVP Waiver: No

    Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh
    GWVR: <6000 >6000 (All)
    -----
    VMT Distribution: 0.4979 0.3387 0.1143 0.0128 0.0012 0.0019 0.0299 0.0033 1.0000
    -----
Composite Emission Factors (g/mi):
    Composite VOC : 1.635 1.795 1.832 1.804 2.258 1.062 1.177 0.842 3.16 1.699
    Composite CO : 13.53 15.90 16.40 16.03 24.79 2.487 1.968 4.820 21.24 14.533
    Composite NOX : 1.257 1.362 1.507 1.399 3.751 1.701 1.462 11.028 0.87 1.645
    -----
* # # # # # # # # # # # # # # # # # #
* HOPEWELL CITY, ROADSCC 310, 16.69 MPH
* File 1, Run 5, Scenario 4.
* # # # # # # # # # # # # # # # # #
M615 Comment:
    User supplied VMT mix.
M583 Warning:
    The user supplied arterial average speed of 16.7
    will be used for all hours of the day. 100% of VMT
    has been assigned to the arterial/collector roadway
    type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005

```

Table 4.2-6
Sample Mobile 6.2 Output File

Month:	July										
Altitude:	Low										
Minimum Temperature:	71.5 (F)										
Maximum Temperature:	92.9 (F)										
Minimum Rel. Hum.:	44.2 (%)										
Maximum Rel. Hum.:	91.6 (%)										
Barometric Pressure:	30.02 (inches Hg)										
Nominal Fuel RVP:	6.8 psi										
Weathered RVP:	6.5 psi										
Fuel Sulfur Content:	90. ppm										
Exhaust I/M Program:	No										
Evap I/M Program:	No										
ATP Program:	No										
Reformulated Gas:	No										
Ether Blend Market Share:	1.000	Alcohol Blend Market Share:	0.000								
Ether Blend Oxygen Content:	0.021	Alcohol Blend Oxygen Content:	0.000								
		Alcohol Blend RVP Waiver:	No								
Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh	
VMT Distribution:	0.4970	0.3380	0.1141		0.0133	0.0012	0.0019	0.0310	0.0035	1.0000	
<hr/>											
Composite Emission Factors (g/mi):											
Composite VOC :	1.668	1.830	1.869	1.840	2.342	1.082	1.200	0.866	3.22	1.734	
Composite CO :	13.74	16.10	16.61	16.23	25.89	2.547	2.017	5.023	21.99	14.750	
Composite NOX :	1.277	1.380	1.527	1.417	3.726	1.728	1.486	11.205	0.87	1.680	
<hr/>											
* #											
* HOPEWELL CITY, ROADSCC 330, 12.9 MPH											
* File 1, Run 5, Scenario 5.											
* #											
M615 Comment:											
User supplied VMT mix.											
* Reading Hourly Roadway VMT distribution from the following external											
* data file: C:\MOBILE62\RICHMOND\LOCAL.TXT											
Reading User Supplied ROADWAY VMT Factors											
* Reading PM Gas Carbon ZML Levels											
* from the external data file PMGZML.CSV											
* Reading PM Gas Carbon DR1 Levels											
* from the external data file PMGDR1.CSV											
* Reading PM Gas Carbon DR2 Levels											
* from the external data file PMGDR2.CSV											
* Reading PM Diesel Zero Mile Levels											
* from the external data file PMDZML.CSV											
* Reading the First PM Deterioration Rates											
* from the external data file PMDDR1.CSV											
* Reading the Second PM Deterioration Rates											
* from the external data file PMDDR2.CSV											
M 48 Warning:											
there are no sales for vehicle class HDGV8b											
LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D											
Calendar Year:	2005										
Month:	July										
Altitude:	Low										
Minimum Temperature:	71.5 (F)										
Maximum Temperature:	92.9 (F)										
Minimum Rel. Hum.:	44.2 (%)										
Maximum Rel. Hum.:	91.6 (%)										
Barometric Pressure:	30.02 (inches Hg)										
Nominal Fuel RVP:	6.8 psi										
Weathered RVP:	6.5 psi										
Fuel Sulfur Content:	90. ppm										
Exhaust I/M Program:	No										
Evap I/M Program:	No										
ATP Program:	No										
Reformulated Gas:	No										
Ether Blend Market Share:	1.000	Alcohol Blend Market Share:	0.000								
Ether Blend Oxygen Content:	0.021	Alcohol Blend Oxygen Content:	0.000								

Table 4.2-6
Sample Mobile 6.2 Output File

Table 4.2-6
Sample Mobile 6.2 Output File

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV

M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

Calendar Year:	2005
Month:	July
Altitude:	Low
Minimum Temperature:	71.5 (F)
Maximum Temperature:	92.9 (F)
Minimum Rel. Hum.:	44.2 (%)
Maximum Rel. Hum.:	91.6 (%)
Barometric Pressure:	30.02 (inches Hg)
Nominal Fuel RVP:	6.8 psi
Weathered RVP:	6.5 psi
Fuel Sulfur Content:	90. ppm

Exhaust I/M Program:	No
Evap I/M Program:	No
ATP Program:	No
Reformulated Gas:	No

Ether Blend Market Share:	1.000	Alcohol Blend Market Share:	0.000
Ether Blend Oxygen Content:	0.021	Alcohol Blend Oxygen Content:	0.000
Alcohol Blend RVP Waiver: No			

Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
GVWR:	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
VMT Distribution:	0.4724	0.3213	0.1084		0.0276	0.0009	0.0018	0.0660	0.0017	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	1.002	1.073	1.068	1.071	0.627	0.622	0.634	0.326	2.45	0.978
Composite CO :	14.41	16.34	16.09	16.28	7.78	1.587	1.134	1.777	10.55	14.154
Composite NOX :	0.961	1.154	1.264	1.182	4.703	1.733	1.464	13.241	1.25	1.971

* #

* RICHMOND CITY, ROADSCC 250, 54.4 MPH

* File 1, Run 6, Scenario 2.

* #

M615 Comment:

User supplied VMT mix.

M582 Warning:

The user supplied freeway average speed of 54.4 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV

M 48 Warning:

there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

Calendar Year:	2005
Month:	July
Altitude:	Low
Minimum Temperature:	71.5 (F)
Maximum Temperature:	92.9 (F)
Minimum Rel. Hum.:	44.2 (%)
Maximum Rel. Hum.:	91.6 (%)
Barometric Pressure:	30.02 (inches Hg)

Table 4.2-6
Sample Mobile 6.2 Output File

Nominal Fuel RVP:	6.8 psi									
Weathered RVP:	6.5 psi									
Fuel Sulfur Content:	90. ppm									
Exhaust I/M Program:	No									
Evap I/M Program:	No									
ATP Program:	No									
Reformulated Gas:	No									
Ether Blend Market Share:	1.000	Alcohol Blend Market Share:	0.000							
Ether Blend Oxygen Content:	0.021	Alcohol Blend Oxygen Content:	0.000							
Alcohol Blend RVP Waiver: No										
Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.5031	0.3422	0.1154		0.0105	0.0010	0.0019	0.0251	0.0009	1.0000
Composite Emission Factors (g/mi):										
Composite VOC :	0.993	1.062	1.057	1.061	0.620	0.619	0.631	0.322	2.61	1.004
Composite CO :	14.73	16.67	16.40	16.60	8.32	1.610	1.152	1.845	13.79	15.156
Composite NOX :	0.967	1.163	1.274	1.191	4.778	1.873	1.584	14.183	1.31	1.443
* # # # # # # # # # # # # # # # # # #										
* RICHMOND CITY, ROADSCC 270, 18.61 MPH										
* File 1, Run 6, Scenario 3.										
* # # # # # # # # # # # # # # # # # #										
M615 Comment:	User supplied VMT mix.									
M583 Warning:	The user supplied arterial average speed of 18.6 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.									
* Reading PM Gas Carbon ZML Levels										
* from the external data file PMGZML.CSV										
* Reading PM Gas Carbon DRL Levels										
* from the external data file PMGDRL1.CSV										
* Reading PM Gas Carbon DR2 Levels										
* from the external data file PMGDR2.CSV										
* Reading PM Diesel Zero Mile Levels										
* from the external data file PMDZML.CSV										
* Reading the First PM Deterioration Rates										
* from the external data file PMDDR1.CSV										
* Reading the Second PM Deterioration Rates										
* from the external data file PMDDR2.CSV										
M 48 Warning:	there are no sales for vehicle class HDGV8b									
LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D										
Calendar Year:	2005									
Month:	July									
Altitude:	Low									
Minimum Temperature:	71.5 (F)									
Maximum Temperature:	92.9 (F)									
Minimum Rel. Hum.:	44.2 (%)									
Maximum Rel. Hum.:	91.6 (%)									
Barometric Pressure:	30.02 (inches Hg)									
Nominal Fuel RVP:	6.8 psi									
Weathered RVP:	6.5 psi									
Fuel Sulfur Content:	90. ppm									
Exhaust I/M Program:	No									
Evap I/M Program:	No									
ATP Program:	No									
Reformulated Gas:	No									
Ether Blend Market Share:	1.000	Alcohol Blend Market Share:	0.000							
Ether Blend Oxygen Content:	0.021	Alcohol Blend Oxygen Content:	0.000							
Alcohol Blend RVP Waiver: No										
Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4988	0.3393	0.1144		0.0124	0.0010	0.0019	0.0297	0.0025	1.0000
Composite Emission Factors (g/mi):										

Table 4.2-6
Sample Mobile 6.2 Output File

```

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July
            Altitude: Low
                Minimum Temperature: 71.5 (F)
                Maximum Temperature: 92.9 (F)
                    Minimum Rel. Hum.: 44.2 (%)
                    Maximum Rel. Hum.: 91.6 (%)
                    Barometric Pressure: 30.02 (inches Hg)
                        Nominal Fuel RVP: 6.8 psi
                        Weathered RVP: 6.5 psi
                        Fuel Sulfur Content: 90. ppm

    Exhaust I/M Program: No
        Evap I/M Program: No
            ATP Program: No
            Reformulated Gas: No

Ether Blend Market Share: 1.000      Alcohol Blend Market Share: 0.000
Ether Blend Oxygen Content: 0.021    Alcohol Blend Oxygen Content: 0.000
                                         Alcohol Blend RVP Waiver: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh
  GVWR: <6000 >6000 (All) ----- ----- ----- -----
  VMT Distribution: 0.4971 0.3381 0.1141 0.0131 0.0010 0.0019 0.0312 0.0035 1.0000
-----
Composite Emission Factors (g/mi):
  Composite VOC : 1.307 1.386 1.385 1.386 1.272 0.908 0.951 0.669 3.21 1.328
  Composite CO : 11.55 13.42 13.52 13.45 13.09 2.149 1.567 3.423 19.31 12.172
  Composite NOX : 1.071 1.202 1.328 1.234 3.659 1.482 1.250 10.061 0.93 1.459
-----

* # # # # # # # # # # # # # # # # #
* RICHMOND CITY, ROADSCC 330, 12.9 MPH
* File 1, Run 6, Scenario 6.
* # # # # # # # # # # # # # # # # #
M615 Comment:
    User supplied VMT mix.

* Reading Hourly Roadway VMT distribution from the following external
* data file: C:\MOBILE62\RICHMOND\LOCAL.TXT

    Reading User Supplied ROADWAY VMT Factors

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

```

Table 4.2-6
Sample Mobile 6.2 Output File

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
 Calendar Year: 2005
 Month: July
 Altitude: Low
 Minimum Temperature: 71.5 (F)
 Maximum Temperature: 92.9 (F)
 Minimum Rel. Hum.: 44.2 (%)
 Maximum Rel. Hum.: 91.6 (%)
 Barometric Pressure: 30.02 (inches Hg)
 Nominal Fuel RVP: 6.8 psi
 Weathered RVP: 6.5 psi
 Fuel Sulfur Content: 90. ppm

Exhaust I/M Program: No
 Evap I/M Program: No
 ATP Program: No
 Reformulated Gas: No

Ether Blend Market Share: 1.000 Alcohol Blend Market Share: 0.000
 Ether Blend Oxygen Content: 0.021 Alcohol Blend Oxygen Content: 0.000
 Alcohol Blend RVP Waiver: No

Vehicle Type: GVWR:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4970	0.3380	0.1140		0.0124	0.0010	0.0019	0.0298	0.0059	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	1.592	1.693	1.696	1.694	1.907	1.109	1.173	0.910	3.95	1.634
Composite CO :	9.68	12.74	12.99	12.80	20.84	2.791	2.060	5.303	28.30	11.188
Composite NOX :	0.964	1.064	1.187	1.095	3.413	1.761	1.489	10.823	0.87	1.349

 * MOBILE6.2.03 (24-Sep-2003) *
 * Input file: C:\02SIP\RICHMOND\TEST\RICH05.IN (file 1, run 7). *

* Reading Registration Distributions from the following external
 * data file: C:\MOBILE62\RICHMOND\2005\PRGEO05.RDT

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
 M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
 M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
 M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
 M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
 M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
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 M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
 M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
 M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
 M 603 Comment: User has disabled the calculation of REFUELING emissions.

* Reading 94+ LEV IMPLEMENTATION SCHEDULE from the following external
 * data file: C:\MOBILE62\RICHMOND\NLEVNE.D
 M616 Comment: User has supplied post-1999 sulfur levels.

* #
 * PRINCE GEORGE COUNTY, ROADSCC 110, 63.8 MPH
 * File 1, Run 7, Scenario 1.
 * #
 M615 Comment: User supplied VMT mix.

Table 4.2-6
Sample Mobile 6.2 Output File

M515 Warning:

The combined freeway and ramp average speed entered cannot be greater than 60.7 miles per hour.
The average speed will be reset to this value.

M582 Warning:

The user supplied freeway average speed of 60.7 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV

M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

Calendar Year: 2005

Month: July

Altitude: Low

Minimum Temperature: 71.5 (F)

Maximum Temperature: 92.9 (F)

Minimum Rel. Hum.: 44.2 (%)

Maximum Rel. Hum.: 91.6 (%)

Barometric Pressure: 30.02 (inches Hg)

Nominal Fuel RVP: 8.4 psi

Weathered RVP: 8.0 psi

Fuel Sulfur Content: 92. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
---------------	------	-----------------	-----------------	---------------	------	------	------	------	----	---------

VMT Distribution:	0.4315	0.2935	0.0990		0.0513	0.0010	0.0016	0.1194	0.0027	1.0000
-------------------	--------	--------	--------	--	--------	--------	--------	--------	--------	--------

Composite Emission Factors (g/mi):

Composite VOC :	1.108	1.200	1.207	1.202	1.175	0.650	0.654	0.363	2.94	1.063
Composite CO :	16.86	19.07	19.17	19.10	20.17	1.788	1.285	2.621	26.13	16.191
Composite NOX :	1.000	1.183	1.324	1.219	5.371	2.547	2.108	18.839	1.41	3.445

* # # # # # # # # # # # # # # # # # #

* PRINCE GEORGE COUNTY, ROADSCC 130, 54.89 MPH

* File 1, Run 7, Scenario 2.

* # # # # # # # # # # # # # # # # # #

M615 Comment:

User supplied VMT mix.

M582 Warning:

The user supplied freeway average speed of 54.9 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

Table 4.2-6
Sample Mobile 6.2 Output File

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV

M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

Calendar Year:	2005
Month:	July
Altitude:	Low
Minimum Temperature:	71.5 (F)
Maximum Temperature:	92.9 (F)
Minimum Rel. Hum.:	44.2 (%)
Maximum Rel. Hum.:	91.6 (%)
Barometric Pressure:	30.02 (inches Hg)
Nominal Fuel RVP:	8.4 psi
Weathered RVP:	8.0 psi
Fuel Sulfur Content:	92. ppm

Exhaust I/M Program:	No
Evap I/M Program:	No
ATP Program:	No
Reformulated Gas:	No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
GVWR:		<6000	>6000							
VMT Distribution:	0.4542	0.3089	0.1042		0.0384	0.0010	0.0017	0.0893	0.0022	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	1.139	1.233	1.242	1.235	1.197	0.652	0.657	0.366	2.53	1.114
Composite CO :	15.91	18.13	18.27	18.16	15.91	1.683	1.205	2.258	15.41	15.580
Composite NOX :	0.983	1.157	1.298	1.192	5.147	1.994	1.648	15.078	1.26	2.491

* # # # # # # # # # # # # # # # # #
* PRINCE GEORGE COUNTY, ROADSCC 150, 47.37 MPH

* File 1, Run 7, Scenario 3.

* # # # # # # # # # # # # # # # # #

M615 Comment:

User supplied VMT mix.

M583 Warning:

The user supplied arterial average speed of 47.4
will be used for all hours of the day. 100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDRL1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDRL2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV

M 48 Warning:

there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

Calendar Year:	2005
Month:	July
Altitude:	Low
Minimum Temperature:	71.5 (F)
Maximum Temperature:	92.9 (F)
Minimum Rel. Hum.:	44.2 (%)
Maximum Rel. Hum.:	91.6 (%)
Barometric Pressure:	30.02 (inches Hg)
Nominal Fuel RVP:	8.4 psi
Weathered RVP:	8.0 psi
Fuel Sulfur Content:	92. ppm

Exhaust I/M Program: No

Table 4.2-6
Sample Mobile 6.2 Output File

Evap I/M Program: No
 ATP Program: No
 Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4816	0.3276	0.1105		0.0224	0.0011	0.0018	0.0523	0.0027	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	1.182	1.278	1.288	1.280	1.275	0.669	0.675	0.388	2.35	1.187
Composite CO :	13.96	16.40	16.64	16.46	13.26	1.627	1.162	2.062	10.91	14.373
Composite NOX :	0.947	1.103	1.245	1.139	4.853	1.569	1.294	10.752	1.07	1.633

* #
* PRINCE GEORGE COUNTY, ROADSCC 170, 45.85 MPH
* File 1, Run 7, Scenario 4.
* #
M615 Comment:
User supplied VMT mix.

M583 Warning:
The user supplied arterial average speed of 45.8
will be used for all hours of the day. 100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DRL Levels
* from the external data file PMGDRL.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDRL2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
Calendar Year: 2005
Month: July
Altitude: Low
Minimum Temperature: 71.5 (F)
Maximum Temperature: 92.9 (F)
Minimum Rel. Hum.: 44.2 (%)
Maximum Rel. Hum.: 91.6 (%)
Barometric Pressure: 30.02 (inches Hg)
Nominal Fuel RVP: 8.4 psi
Weathered RVP: 8.0 psi
Fuel Sulfur Content: 92. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4787	0.3256	0.1098		0.0237	0.0011	0.0018	0.0553	0.0039	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	1.194	1.289	1.300	1.291	1.298	0.676	0.682	0.396	2.35	1.198
Composite CO :	13.73	16.17	16.42	16.24	13.12	1.628	1.164	2.067	11.01	14.116
Composite NOX :	0.943	1.097	1.240	1.133	4.798	1.525	1.257	10.446	1.05	1.645

* #
* PRINCE GEORGE COUNTY, ROADSCC 190, 37.57 MPH
* File 1, Run 7, Scenario 5.
* #
M615 Comment:
User supplied VMT mix.

M583 Warning:

Table 4.2-6
Sample Mobile 6.2 Output File

The user supplied arterial average speed of 37.6 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

- * Reading PM Gas Carbon ZML Levels
- * from the external data file PMGZML.CSV
- * Reading PM Gas Carbon DR1 Levels
- * from the external data file PMGDR1.CSV
- * Reading PM Gas Carbon DR2 Levels
- * from the external data file PMGDR2.CSV
- * Reading PM Diesel Zero Mile Levels
- * from the external data file PMDZML.CSV
- * Reading the First PM Deterioration Rates
- * from the external data file PMDDR1.CSV
- * Reading the Second PM Deterioration Rates
- * from the external data file PMDDR2.CSV

M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
 Calendar Year: 2005
 Month: July
 Altitude: Low
 Minimum Temperature: 71.5 (F)
 Maximum Temperature: 92.9 (F)
 Minimum Rel. Hum.: 44.2 (%)
 Maximum Rel. Hum.: 91.6 (%)
 Barometric Pressure: 30.02 (inches Hg)
 Nominal Fuel RVP: 8.4 psi
 Weathered RVP: 8.0 psi
 Fuel Sulfur Content: 92. ppm

Exhaust I/M Program: No
 Evap I/M Program: No
 ATP Program: No
 Reformulated Gas: No

Vehicle Type: GVWR:	LDGV <6000	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4856	0.3303	0.1114		0.0190	0.0011	0.0018	0.0443	0.0063	1.0000

Composite Emission Factors (g/mi):										
Composite VOC :	1.266	1.348	1.360	1.351	1.469	0.725	0.735	0.461	2.45	1.278
Composite CO :	12.54	14.99	15.28	15.06	13.82	1.691	1.212	2.287	12.48	13.190
Composite NOX :	0.929	1.070	1.214	1.106	4.517	1.399	1.152	9.597	1.01	1.461

- * # # # # # # # # # # # # # # # # # #
- * PRINCE GEORGE COUNTY, ROADSCC 210, 25 MPH
- * File 1, Run 7, Scenario 6.
- * # # # # # # # # # # # # # # # # # #
- M615 Comment:
User supplied VMT mix.

M583 Warning:
The user supplied arterial average speed of 25.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

- * Reading PM Gas Carbon ZML Levels
- * from the external data file PMGZML.CSV
- * Reading PM Gas Carbon DR1 Levels
- * from the external data file PMGDR1.CSV
- * Reading PM Gas Carbon DR2 Levels
- * from the external data file PMGDR2.CSV
- * Reading PM Diesel Zero Mile Levels
- * from the external data file PMDZML.CSV
- * Reading the First PM Deterioration Rates
- * from the external data file PMDDR1.CSV
- * Reading the Second PM Deterioration Rates
- * from the external data file PMDDR2.CSV

Table 4.2-6
Sample Mobile 6.2 Output File

```

M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July
        Altitude: Low
    Minimum Temperature: 71.5 (F)
    Maximum Temperature: 92.9 (F)
        Minimum Rel. Hum.: 44.2 (%)
        Maximum Rel. Hum.: 91.6 (%)
    Barometric Pressure: 30.02 (inches Hg)
        Nominal Fuel RVP: 8.4 psi
        Weathered RVP: 8.0 psi
    Fuel Sulfur Content: 92. ppm

    Exhaust I/M Program: No
    Evap I/M Program: No
    ATP Program: No
    Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh
  GVWR: <6000 >6000 (All) ----- ----- ----- ----- -----
  VMT Distribution: 0.5022 0.3416 0.1152 0.0101 0.0011 0.0019 0.0235 0.0043 1.0000
-----
Composite Emission Factors (g/mi):
  Composite VOC : 1.462 1.525 1.544 1.530 2.007 0.870 0.892 0.650 2.81 1.484
  Composite CO : 12.05 14.41 14.83 14.52 19.85 2.002 1.449 3.366 17.56 13.046
  Composite NOX : 1.015 1.131 1.283 1.169 4.079 1.452 1.196 9.950 0.91 1.327
-----

* # # # # # # # # # # # # # # # # # #
* PRINCE GEORGE COUNTY, ROADSCC 230, 60.4 MPH
* File 1, Run 7, Scenario 7.
* # # # # # # # # # # # # # # # # # #
M615 Comment:
    User supplied VMT mix.

M582 Warning:
    The user supplied freeway average speed of 60.4
    will be used for all hours of the day. 100% of VMT
    has been assigned to a fixed combination of freeways
    and freeway ramps for all hours of the day and all
    vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV

M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July
        Altitude: Low
    Minimum Temperature: 71.5 (F)
    Maximum Temperature: 92.9 (F)
        Minimum Rel. Hum.: 44.2 (%)
        Maximum Rel. Hum.: 91.6 (%)
    Barometric Pressure: 30.02 (inches Hg)
        Nominal Fuel RVP: 8.4 psi
        Weathered RVP: 8.0 psi
    Fuel Sulfur Content: 92. ppm

    Exhaust I/M Program: No
    Evap I/M Program: No
    ATP Program: No
    Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh

```

Table 4.2-6
Sample Mobile 6.2 Output File

GVWR:	<6000	>6000	(All)							
VMT Distribution:	0.4723	0.3212	0.1084	0.0281	0.0011	0.0018	0.0654	0.0017	1.0000	
Composite Emission Factors (g/mi):										
Composite VOC :	1.110	1.202	1.209	1.203	1.176	0.650	0.654	0.363	2.92	1.105
Composite CO :	16.81	19.02	19.12	19.05	19.90	1.781	1.280	2.599	25.55	16.897
Composite NOX :	0.999	1.182	1.323	1.217	5.358	2.514	2.081	18.614	1.40	2.372

* # # # # # # # # # # # # # # # # # #

* PRINCE GEORGE COUNTY, ROADSCC 270, 49.65 MPH

* File 1, Run 7, Scenario 8.

* # # # # # # # # # # # # # # # # # #

M615 Comment:

User supplied VMT mix.

M583 Warning:

The user supplied arterial average speed of 49.7
will be used for all hours of the day. 100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels

* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DRL Levels

* from the external data file PMGDRL.CSV

* Reading PM Gas Carbon DR2 Levels

* from the external data file PMGDRL2.CSV

* Reading PM Diesel Zero Mile Levels

* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates

* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates

* from the external data file PMDDR2.CSV

M 48 Warning:

there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

 Calendar Year: 2005

 Month: July

 Altitude: Low

 Minimum Temperature: 71.5 (F)

 Maximum Temperature: 92.9 (F)

 Minimum Rel. Hum.: 44.2 (%)

 Maximum Rel. Hum.: 91.6 (%)

 Barometric Pressure: 30.02 (inches Hg)

 Nominal Fuel RVP: 8.4 psi

 Weathered RVP: 8.0 psi

 Fuel Sulfur Content: 92. ppm

 Exhaust I/M Program: No

 Evap I/M Program: No

 ATP Program: No

 Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
GVWR:	<6000	>6000	(All)							
VMT Distribution:	0.4987	0.3392	0.1145		0.0126	0.0011	0.0019	0.0294	0.0025	1.0000

Composite Emission Factors (g/mi):

Composite VOC : 1.165 1.262 1.273 1.265 1.243 0.661 0.666 0.377 2.34 1.190

Composite CO : 14.28 16.72 16.94 16.77 13.44 1.625 1.161 2.056 10.76 14.993

Composite NOX : 0.951 1.111 1.253 1.147 4.928 1.632 1.346 11.176 1.09 1.393

* # # # # # # # # # # # # # # # # # #

* PRINCE GEORGE COUNTY, ROADSCC 290, 43.84 MPH

* File 1, Run 7, Scenario 9.

* # # # # # # # # # # # # # # # # # #

M615 Comment:

User supplied VMT mix.

M583 Warning:

The user supplied arterial average speed of 43.8
will be used for all hours of the day. 100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels

Table 4.2-6
Sample Mobile 6.2 Output File

```

* from the external data file PMGZML.CSV
* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV
* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV
* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV
* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV
* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
    Month: July

        Altitude: Low
        Minimum Temperature: 71.5 (F)
        Maximum Temperature: 92.9 (F)
        Minimum Rel. Hum.: 44.2 (%)
        Maximum Rel. Hum.: 91.6 (%)
        Barometric Pressure: 30.02 (inches Hg)
        Nominal Fuel RVP: 8.4 psi
        Weathered RVP: 8.0 psi
        Fuel Sulfur Content: 92. ppm

        Exhaust I/M Program: No
        Evap I/M Program: No
        ATP Program: No
        Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh
  GVWR:      <6000 >6000 (All)          ----- ----- ----- ----- ----- -----
VMT Distribution: 0.4980 0.3387 0.1143           0.0128 0.0011 0.0019 0.0299 0.0033 1.0000
-----
Composite Emission Factors (g/mi):
  Composite VOC : 1.210   1.303   1.314   1.305   1.333   0.685   0.692   0.409   2.37   1.233
  Composite CO : 13.44    15.89   16.14   15.95   13.10   1.636   1.169   2.094   11.25  14.191
  Composite NOX : 0.939   1.090   1.233   1.126   4.730   1.481   1.220   10.147  1.04   1.349
-----
* # # # # # # # # # # # # # # # #
* PRINCE GEORGE COUNTY, ROADSCC 310, 34.91 MPH
* File 1, Run 7, Scenario 10.
* # # # # # # # # # # # # # # # #
M615 Comment:
    User supplied VMT mix.
M583 Warning:
    The user supplied arterial average speed of 34.9
    will be used for all hours of the day. 100% of VMT
    has been assigned to the arterial/collector roadway
    type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV
* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV
* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV
* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV
* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV
* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
    Month: July

```

Table 4.2-6
Sample Mobile 6.2 Output File

Altitude:	Low									
Minimum Temperature:	71.5 (F)									
Maximum Temperature:	92.9 (F)									
Minimum Rel. Hum.:	44.2 (%)									
Maximum Rel. Hum.:	91.6 (%)									
Barometric Pressure:	30.02 (inches Hg)									
Nominal Fuel RVP:	8.4 psi									
Weathered RVP:	8.0 psi									
Fuel Sulfur Content:	92. ppm									
Exhaust I/M Program:	No									
Evap I/M Program:	No									
ATP Program:	No									
Reformulated Gas:	No									
Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4970	0.3381	0.1141		0.0133	0.0011	0.0019	0.0310	0.0035	1.0000
Composite Emission Factors (g/mi):										
Composite VOC :	1.293	1.372	1.384	1.375	1.546	0.747	0.759	0.490	2.50	1.311
Composite CO :	12.13	14.59	14.90	14.67	14.44	1.729	1.240	2.416	13.21	12.981
Composite NOX :	0.927	1.064	1.209	1.100	4.420	1.381	1.137	9.470	0.99	1.318

* # # # # # # # # # # # # # # # # # #
* PRINCE GEORGE COUNTY, ROADSCC 330, 12.9 MPH
* File 1, Run 7, Scenario 11.
* # # # # # # # # # # # # # # # # # #
M615 Comment:
User supplied VMT mix.

* Reading Hourly Roadway VMT distribution from the following external
* data file: C:\MOBILE62\RICHMOND\LOCAL.TXT

Reading User Supplied ROADWAY VMT Factors

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV

M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
Calendar Year: 2005
Month: July
Altitude: Low
Minimum Temperature: 71.5 (F)
Maximum Temperature: 92.9 (F)
Minimum Rel. Hum.: 44.2 (%)
Maximum Rel. Hum.: 91.6 (%)
Barometric Pressure: 30.02 (inches Hg)
Nominal Fuel RVP: 8.4 psi
Weathered RVP: 8.0 psi
Fuel Sulfur Content: 92. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.4968	0.3380	0.1140		0.0127	0.0011	0.0019	0.0296	0.0059	1.0000
Composite Emission Factors (g/mi):										
Composite VOC :	2.070	2.078	2.109	2.086	3.559	1.164	1.208	1.034	3.66	2.072
Composite CO :	10.59	14.16	14.83	14.33	39.24	2.885	2.122	6.431	30.57	12.617

Table 4.2-6
Sample Mobile 6.2 Output File

```

Composite NOX :      0.976      1.054      1.208      1.093      3.663      1.843      1.522     11.493      0.81      1.375
*****
* MOBILE6.2.03 (24-Sep-2003) *
* Input file: C:\02SIP\RICHMOND\TEST\RICH05.IN (file 1, run 8). *
*****



* Reading Registration Distributions from the following external
* data file: C:\MOBILE62\RICHMOND\2005\PETER05.RDT
M 49 Warning:
   1.00      MYR sum not = 1. (will normalize)
M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
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M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
M 49 Warning:   1.00      MYR sum not = 1. (will normalize)
M603 Comment:
   User has disabled the calculation of REFUELING emissions.

* Reading 94+ LEV IMPLEMENTATION SCHEDULE from the following external
* data file: C:\MOBILE62\RICHMOND\NLEVNE.D
M616 Comment:
   User has supplied post-1999 sulfur levels.

* # # # # # # # # # # # # # # # # # #
* PETERSBURG CITY, ROADSCC 230, 49.0 MPH
* File 1, Run 8, Scenario 1.
* # # # # # # # # # # # # # # # # # #
M615 Comment:
   User supplied VMT mix.
M582 Warning:
   The user supplied freeway average speed of 49.0
   will be used for all hours of the day. 100% of VMT
   has been assigned to a fixed combination of freeways
   and freeway ramps for all hours of the day and all
   vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
   there are no sales for vehicle class HDGV8b

```

Table 4.2-6
Sample Mobile 6.2 Output File

```

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July
            Altitude: Low
    Minimum Temperature: 71.5 (F)
    Maximum Temperature: 92.9 (F)
        Minimum Rel. Hum.: 44.2 (%)
        Maximum Rel. Hum.: 91.6 (%)
    Barometric Pressure: 30.02 (inches Hg)
        Nominal Fuel RVP: 8.4 psi
        Weathered RVP: 8.0 psi
    Fuel Sulfur Content: 92. ppm

    Exhaust I/M Program: No
        Evap I/M Program: No
        ATP Program: No
        Reformulated Gas: No

    Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh
    GVWR: <6000 >6000 (All)
    -----
    VMT Distribution: 0.4722 0.3211 0.1084 0.0283 0.0012 0.0019 0.0653 0.0017 1.0000

Composite Emission Factors (g/mi):
    Composite VOC : 1.571 1.736 1.803 1.753 1.382 0.707 0.897 0.390 2.69 1.566
    Composite CO : 17.63 21.18 22.11 21.41 15.37 1.700 1.563 2.190 11.71 18.125
    Composite NOX : 1.156 1.311 1.453 1.347 4.918 1.755 1.606 12.887 1.14 2.111

* # # # # # # # # # # # # # # # # # #
* PETERSBURG CITY, ROADSCC 270, 12.66 MPH
* File 1, Run 8, Scenario 2.
* # # # # # # # # # # # # # # # # # #
M615 Comment:
    User supplied VMT mix.

M583 Warning:
    The user supplied arterial average speed of 12.7
    will be used for all hours of the day. 100% of VMT
    has been assigned to the arterial/collector roadway
    type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV

M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July
            Altitude: Low
    Minimum Temperature: 71.5 (F)
    Maximum Temperature: 92.9 (F)
        Minimum Rel. Hum.: 44.2 (%)
        Maximum Rel. Hum.: 91.6 (%)
    Barometric Pressure: 30.02 (inches Hg)
        Nominal Fuel RVP: 8.4 psi
        Weathered RVP: 8.0 psi
    Fuel Sulfur Content: 92. ppm

    Exhaust I/M Program: No
        Evap I/M Program: No
        ATP Program: No
        Reformulated Gas: No

    Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh
    GVWR: <6000 >6000 (All)
    -----
    VMT Distribution: 0.4986 0.3391 0.1145 0.0127 0.0012 0.0020 0.0293 0.0025 1.0000

```

Table 4.2-6
Sample Mobile 6.2 Output File

Composite Emission Factors (g/mi):

	Composite VOC	2.836	2.879	3.020	2.915	3.900	1.238	1.533	1.053	4.18	2.832
Composite CO :	17.80	21.31	23.10	21.76	43.98	2.988	2.665	6.726	32.72	19.591	
Composite NOX :	1.560	1.608	1.790	1.654	3.667	1.952	1.785	12.729	0.85	1.957	

* #

* PETERSBURG CITY, ROADSCC 290, 12.86 MPH

* File 1, Run 8, Scenario 3.

* #

M615 Comment:

User supplied VMT mix.

M583 Warning:

The user supplied arterial average speed of 12.9
will be used for all hours of the day. 100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels

* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels

* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels

* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels

* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates

* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates

* from the external data file PMDDR2.CSV

M 48 Warning:

there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

Calendar Year: 2005

Month: July

Altitude: Low

Minimum Temperature: 71.5 (F)

Maximum Temperature: 92.9 (F)

Minimum Rel. Hum.: 44.2 (%)

Maximum Rel. Hum.: 91.6 (%)

Barometric Pressure: 30.02 (inches Hg)

Nominal Fuel RVP: 8.4 psi

Weathered RVP: 8.0 psi

Fuel Sulfur Content: 92. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
GVWR:	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
VMT Distribution:	0.4979	0.3385	0.1143	-----	0.0129	0.0012	0.0020	0.0298	0.0033	1.0000

Composite Emission Factors (g/mi):

	Composite VOC	2.809	2.854	2.994	2.889	3.852	1.231	1.525	1.044	4.15	2.806
--	---------------	-------	-------	-------	-------	-------	-------	-------	-------	------	-------

Composite CO :	17.70	21.21	22.98	21.66	43.39	2.964	2.644	6.642	32.25	19.491
----------------	-------	-------	-------	-------	-------	-------	-------	-------	-------	--------

Composite NOX :	1.550	1.599	1.780	1.645	3.673	1.942	1.776	12.660	0.85	1.950
-----------------	-------	-------	-------	-------	-------	-------	-------	--------	------	-------

* #

* PETERSBURG CITY, ROADSCC 310, 12.47 MPH

* File 1, Run 8, Scenario 4.

* #

M615 Comment:

User supplied VMT mix.

M583 Warning:

The user supplied arterial average speed of 12.5
will be used for all hours of the day. 100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels

* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels

Table 4.2-6
Sample Mobile 6.2 Output File

```

* from the external data file PMGDR1.CSV
* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July
            Altitude: Low
                Minimum Temperature: 71.5 (F)
                Maximum Temperature: 92.9 (F)
                    Minimum Rel. Hum.: 44.2 (%)
                    Maximum Rel. Hum.: 91.6 (%)
                    Barometric Pressure: 30.02 (inches Hg)
                        Nominal Fuel RVP: 8.4 psi
                        Weathered RVP: 8.0 psi
                        Fuel Sulfur Content: 92. ppm

    Exhaust I/M Program: No
        Evap I/M Program: No
            ATP Program: No
            Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT (All) HDGV LDDV LDDT HDDV MC All Veh
  GVWR: <6000 >6000
  ----- -----
  VMT Distribution: 0.4969 0.3379 0.1141 0.0134 0.0012 0.0020 0.0309 0.0035 1.0000
  -----
Composite Emission Factors (g/mi):
  Composite VOC : 2.862 2.904 3.046 2.940 3.946 1.245 1.541 1.062 4.21 2.856
  Composite CO : 17.90 21.40 23.21 21.86 44.55 3.011 2.685 6.807 33.18 19.709
  Composite NOX : 1.571 1.617 1.800 1.663 3.660 1.962 1.795 12.792 0.85 1.985
  -----
* # # # # # # # # # # # # # # # #
* PETERSBURG CITY, ROADSCC 330, 12.9 MPH
* File 1, Run 8, Scenario 5.
* # # # # # # # # # # # # # # # #
M615 Comment:
    User supplied VMT mix.

* Reading Hourly Roadway VMT distribution from the following external
* data file: C:\MOBILE62\RICHMOND\LOCAL.TXT

Reading User Supplied ROADWAY VMT Factors

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
M 48 Warning:
    there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D
    Calendar Year: 2005
        Month: July
            Altitude: Low
                Minimum Temperature: 71.5 (F)
                Maximum Temperature: 92.9 (F)
                    Minimum Rel. Hum.: 44.2 (%)

```

Table 4.2-6
Sample Mobile 6.2 Output File

Maximum Rel. Hum.: 91.6 (%)
 Barometric Pressure: 30.02 (inches Hg)
 Nominal Fuel RVP: 8.4 psi
 Weathered RVP: 8.0 psi
 Fuel Sulfur Content: 92. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

Vehicle Type: GVWR:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Distribution:	0.4967	0.3378	0.1141	-----	0.0128	0.0012	0.0020	0.0295	0.0059	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	2.757	2.799	2.931	2.832	3.880	1.240	1.536	1.056	4.13	2.759
Composite CO :	12.89	18.12	19.70	18.52	43.82	2.985	2.662	6.713	32.00	15.725
Composite NOX :	1.173	1.226	1.378	1.264	3.658	1.953	1.786	11.614	0.84	1.554

```
*****  
* MOBILE6.2.03 (24-Sep-2003) *  
* Input file: C:\02SIP\RICHMOND\TEST\RICH05.IN (file 1, run 9). *  
*****
```

* Reading Registration Distributions from the following external
* data file: C:\MOBILE62\RICHMOND\2005\CHARL05.RDT

data file: C:\MOBILE02\RICHMOND\2003\CHARLES.RDI
M 49 Warning:

M-49 Warning

¹ See also the discussion of the relationship between *surveillance* and *control* in the introduction.

* Reading 94+ LEV IMPLEMENTATION SCHEDULE from the following external
* data file: C:\MOBILE62\RICHMOND\LEVINE.D

* data file: C:\MOBILE62\RICHMOND\NLEVNE.D
M616 Comment: User has supplied post-1999 sulfur levels.

* #
* CHARLES CITY COUNTY, ROADS 150, 52.99 MPH

M615 Comment:
User supplied VMT mix

User supplied VMT mix.
M583 Warning: The user supplied arterial average speed of 53.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels

from the external data file `PERCENTILE.CSV`

Table 4.2-6
Sample Mobile 6.2 Output File

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV

M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

Calendar Year:	2005
Month:	July
Altitude:	Low
Minimum Temperature:	71.5 (F)
Maximum Temperature:	92.9 (F)
Minimum Rel. Hum.:	44.2 (%)
Maximum Rel. Hum.:	91.6 (%)
Barometric Pressure:	30.02 (inches Hg)
Nominal Fuel RVP:	6.8 psi
Weathered RVP:	6.5 psi
Fuel Sulfur Content:	90. ppm

Exhaust I/M Program:	No
Evap I/M Program:	No
ATP Program:	No
Reformulated Gas:	No

Ether Blend Market Share:	1.000	Alcohol Blend Market Share:	0.000
Ether Blend Oxygen Content:	0.021	Alcohol Blend Oxygen Content:	0.000
Alcohol Blend RVP Waiver: No			

Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
GVWR:	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
VMT Distribution:	0.4809	0.3274	0.1106		0.0223	0.0017	0.0020	0.0524	0.0027	1.0000

Composite Emission Factors (g/mi):

Composite VOC :	1.421	1.515	1.603	1.537	0.855	0.769	0.892	0.349	2.28	1.403
Composite CO :	16.97	19.41	20.18	19.60	10.54	1.831	1.586	1.980	10.01	17.118
Composite NOX :	1.169	1.286	1.424	1.320	4.853	2.049	1.730	11.545	1.21	1.864

* # # # # # # # # # # # # # # # # #
* CHARLES CITY COUNTY, ROADSCC 170, 37.87 MPH
* File 1, Run 9, Scenario 2.
* # # # # # # # # # # # # # # # # # # #

M615 Comment:
User supplied VMT mix.

M583 Warning:
The user supplied arterial average speed of 37.9
will be used for all hours of the day. 100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV

M 48 Warning:
there are no sales for vehicle class HDGV8b

LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D

Calendar Year:	2005
Month:	July
Altitude:	Low
Minimum Temperature:	71.5 (F)
Maximum Temperature:	92.9 (F)

Table 4.2-6
Sample Mobile 6.2 Output File

Minimum Rel. Hum.:	44.2 (%)										
Maximum Rel. Hum.:	91.6 (%)										
Barometric Pressure:	30.02 (inches Hg)										
Nominal Fuel RVP:	6.8 psi										
Weathered RVP:	6.5 psi										
Fuel Sulfur Content:	90. ppm										
Exhaust I/M Program:	No										
Evap I/M Program:	No										
ATP Program:	No										
Reformulated Gas:	No										
Ether Blend Market Share:	1.000	Alcohol Blend Market Share:	0.000								
Ether Blend Oxygen Content:	0.021	Alcohol Blend Oxygen Content:	0.000								
Alcohol Blend RVP Waiver: No											
Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh	
VMT Distribution:	0.4780	0.3254	0.1099		0.0236	0.0017	0.0020	0.0554	0.0039	1.0000	
<hr/>											
Composite Emission Factors (g/mi):											
Composite VOC :	1.541	1.629	1.729	1.655	1.028	0.851	0.983	0.437	2.40	1.518	
Composite CO :	14.57	17.11	17.95	17.32	10.18	1.883	1.629	2.139	11.49	14.917	
Composite NOX :	1.143	1.231	1.372	1.267	4.354	1.618	1.367	9.078	1.05	1.713	
<hr/>											
* # # # # # # # # # # # # # # # # # #											
* CHARLES CITY COUNTY, ROADSCC 190, 31.37 MPH											
* File 1, Run 9, Scenario 3.											
* # # # # # # # # # # # # # # # # # #											
M615 Comment:											
User supplied VMT mix.											
M583 Warning:											
The user supplied arterial average speed of 31.4											
will be used for all hours of the day. 100% of VMT											
has been assigned to the arterial/collector roadway											
type for all hours of the day and all vehicle types.											
* Reading PM Gas Carbon ZML Levels											
* from the external data file PMGZML.CSV											
* Reading PM Gas Carbon DR1 Levels											
* from the external data file PMGDRL.CSV											
* Reading PM Gas Carbon DR2 Levels											
* from the external data file PMGDR2.CSV											
* Reading PM Diesel Zero Mile Levels											
* from the external data file PMDZML.CSV											
* Reading the First PM Deterioration Rates											
* from the external data file PMDDR1.CSV											
* Reading the Second PM Deterioration Rates											
* from the external data file PMDDR2.CSV											
M 48 Warning:											
there are no sales for vehicle class HDGV8b											
LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D											
Calendar Year: 2005											
Month: July											
Altitude: Low											
Minimum Temperature: 71.5 (F)											
Maximum Temperature: 92.9 (F)											
Minimum Rel. Hum.: 44.2 (%)											
Maximum Rel. Hum.: 91.6 (%)											
Barometric Pressure: 30.02 (inches Hg)											
Nominal Fuel RVP: 6.8 psi											
Weathered RVP: 6.5 psi											
Fuel Sulfur Content: 90. ppm											
Exhaust I/M Program:	No										
Evap I/M Program:	No										
ATP Program:	No										
Reformulated Gas:	No										
Ether Blend Market Share:	1.000	Alcohol Blend Market Share:	0.000								
Ether Blend Oxygen Content:	0.021	Alcohol Blend Oxygen Content:	0.000								
Alcohol Blend RVP Waiver: No											
Vehicle Type:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh	
GVWR:	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	

Table 4.2-6
Sample Mobile 6.2 Output File

VMT Distribution:	0.4849	0.3301	0.1115	0.0189	0.0017	0.0020	0.0445	0.0063	1.0000	
Composite Emission Factors (g/mi):										
Composite VOC :	1.623	1.709	1.818	1.736	1.182	0.921	1.061	0.512	2.56	1.619
Composite CO :	13.93	16.47	17.36	16.69	11.71	2.005	1.730	2.513	13.34	14.554
Composite NOX :	1.167	1.239	1.382	1.275	4.139	1.604	1.355	8.998	1.01	1.619
* #										
* CHARLES CITY COUNTY, ROADSCC 210, 25 MPH										
* File 1, Run 9, Scenario 4.										
* #										
M615 Comment:										
User supplied VMT mix.										
M583 Warning:										
The user supplied arterial average speed of 25.0										
will be used for all hours of the day. 100% of VMT										
has been assigned to the arterial/collector roadway										
type for all hours of the day and all vehicle types.										
* Reading PM Gas Carbon ZML Levels										
* from the external data file PMGZML.CSV										
* Reading PM Gas Carbon DR1 Levels										
* from the external data file PMGDR1.CSV										
* Reading PM Gas Carbon DR2 Levels										
* from the external data file PMGDR2.CSV										
* Reading PM Diesel Zero Mile Levels										
* from the external data file PMDZML.CSV										
* Reading the First PM Deterioration Rates										
* from the external data file PMDDR1.CSV										
* Reading the Second PM Deterioration Rates										
* from the external data file PMDDR2.CSV										
M 48 Warning:										
there are no sales for vehicle class HDGV8b										
LEV phase-in data read from file C:\MOBILE62\RICHMOND\NLEVNE.D										
Calendar Year: 2005										
Month: July										
Altitude: Low										
Minimum Temperature: 71.5 (F)										
Maximum Temperature: 92.9 (F)										
Minimum Rel. Hum.: 44.2 (%)										
Maximum Rel. Hum.: 91.6 (%)										
Barometric Pressure: 30.02 (inches Hg)										
Nominal Fuel RVP: 6.8 psi										
Weathered RVP: 6.5 psi										
Fuel Sulfur Content: 90. ppm										
Exhaust I/M Program: No										
Evap I/M Program: No										
ATP Program: No										
Reformulated Gas: No										
Ether Blend Market Share: 1.000										
Ether Blend Oxygen Content: 0.021										
Alcohol Blend Market Share: 0.000										
Alcohol Blend Oxygen Content: 0.000										
Alcohol Blend RVP Waiver: No										
Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh										
GVWR: <6000 >6000 (All)										
VMT Distribution: 0.5015 0.3414 0.1153 0.0100 0.0018 0.0021 0.0236 0.0043 1.0000										
Composite Emission Factors (g/mi):										
Composite VOC : 1.740 1.820 1.942 1.850 1.427 1.022 1.173 0.621 2.80 1.763										
Composite CO : 14.06 16.50 17.52 16.76 14.69 2.218 1.907 3.168 16.08 15.004										
Composite NOX : 1.242 1.297 1.446 1.335 3.924 1.676 1.416 9.409 0.95 1.504										

TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2002	CHARLES CITY COUNTY	MC	0.002	0.001	0.012
2002	CHARLES CITY COUNTY	LDGV	0.217	0.140	1.959
2002	CHARLES CITY COUNTY	LDGT4	0.036	0.016	0.384
2002	CHARLES CITY COUNTY	LDGT3	0.077	0.031	0.833
2002	CHARLES CITY COUNTY	LDGT2	0.113	0.074	1.177
2002	CHARLES CITY COUNTY	LDGT1	0.034	0.019	0.348
2002	CHARLES CITY COUNTY	LDDV	0.000	0.000	0.001
2002	CHARLES CITY COUNTY	LDDT34	0.000	0.000	0.000
2002	CHARLES CITY COUNTY	LDDT12	0.000	0.000	0.000
2002	CHARLES CITY COUNTY	HDGV8b	0.000	0.000	0.000
2002	CHARLES CITY COUNTY	HDGV8a	0.000	0.000	0.000
2002	CHARLES CITY COUNTY	HDGV7	0.000	0.001	0.005
2002	CHARLES CITY COUNTY	HDGV6	0.001	0.002	0.007
2002	CHARLES CITY COUNTY	HDGV5	0.000	0.001	0.003
2002	CHARLES CITY COUNTY	HDGV4	0.000	0.000	0.003
2002	CHARLES CITY COUNTY	HDGV3	0.000	0.001	0.005
2002	CHARLES CITY COUNTY	HDGV2b	0.005	0.016	0.054
2002	CHARLES CITY COUNTY	HDGB	0.000	0.000	0.005
2002	CHARLES CITY COUNTY	HDDV8b	0.004	0.079	0.020
2002	CHARLES CITY COUNTY	HDDV8a	0.001	0.019	0.004
2002	CHARLES CITY COUNTY	HDDV7	0.001	0.010	0.002
2002	CHARLES CITY COUNTY	HDDV6	0.000	0.006	0.001
2002	CHARLES CITY COUNTY	HDDV5	0.000	0.001	0.000
2002	CHARLES CITY COUNTY	HDDV4	0.000	0.001	0.000
2002	CHARLES CITY COUNTY	HDDV3	0.000	0.001	0.000
2002	CHARLES CITY COUNTY	HDDV2b	0.000	0.004	0.001
2002	CHARLES CITY COUNTY	HDDBT	0.000	0.002	0.000
2002	CHARLES CITY COUNTY	HDDBS	0.000	0.002	0.000
	<i>TOTAL for CHARLES CITY COUNTY</i>		0.493	0.428	4.827
2002	CHESTERFIELD COUNTY	MC	0.061	0.025	0.371
2002	CHESTERFIELD COUNTY	LDGV	5.527	4.890	72.363
2002	CHESTERFIELD COUNTY	LDGT4	0.687	0.542	9.177
2002	CHESTERFIELD COUNTY	LDGT3	1.472	0.986	19.817
2002	CHESTERFIELD COUNTY	LDGT2	2.768	2.879	41.143
2002	CHESTERFIELD COUNTY	LDGT1	0.815	0.723	12.206
2002	CHESTERFIELD COUNTY	LDDV	0.005	0.011	0.011
2002	CHESTERFIELD COUNTY	LDDT34	0.007	0.021	0.014

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2002	CHESTERFIELD COUNTY	LDDT12	0.004	0.006	0.007
2002	CHESTERFIELD COUNTY	HDGV8b	0.000	0.000	0.000
2002	CHESTERFIELD COUNTY	HDGV8a	0.000	0.000	0.000
2002	CHESTERFIELD COUNTY	HDGV7	0.009	0.031	0.127
2002	CHESTERFIELD COUNTY	HDGV6	0.015	0.061	0.194
2002	CHESTERFIELD COUNTY	HDGV5	0.007	0.029	0.089
2002	CHESTERFIELD COUNTY	HDGV4	0.005	0.012	0.067
2002	CHESTERFIELD COUNTY	HDGV3	0.007	0.024	0.120
2002	CHESTERFIELD COUNTY	HDGV2b	0.126	0.610	1.567
2002	CHESTERFIELD COUNTY	HDGB	0.007	0.013	0.122
2002	CHESTERFIELD COUNTY	HDDV8b	0.102	3.669	0.625
2002	CHESTERFIELD COUNTY	HDDV8a	0.024	0.898	0.135
2002	CHESTERFIELD COUNTY	HDDV7	0.020	0.481	0.073
2002	CHESTERFIELD COUNTY	HDDV6	0.011	0.261	0.039
2002	CHESTERFIELD COUNTY	HDDV5	0.001	0.033	0.006
2002	CHESTERFIELD COUNTY	HDDV4	0.003	0.070	0.013
2002	CHESTERFIELD COUNTY	HDDV3	0.003	0.068	0.013
2002	CHESTERFIELD COUNTY	HDDV2b	0.009	0.196	0.038
2002	CHESTERFIELD COUNTY	HDDBT	0.002	0.083	0.017
2002	CHESTERFIELD COUNTY	HDDBS	0.004	0.099	0.015
TOTAL for CHESTERFIELD COUNTY			11.704	16.722	158.370
2002	COLONIAL HEIGHTS CITY	MC	0.006	0.002	0.042
2002	COLONIAL HEIGHTS CITY	LDGV	0.521	0.421	6.149
2002	COLONIAL HEIGHTS CITY	LDGT4	0.068	0.046	0.855
2002	COLONIAL HEIGHTS CITY	LDGT3	0.147	0.086	1.849
2002	COLONIAL HEIGHTS CITY	LDGT2	0.266	0.242	3.556
2002	COLONIAL HEIGHTS CITY	LDGT1	0.079	0.062	1.055
2002	COLONIAL HEIGHTS CITY	LDDV	0.000	0.001	0.001
2002	COLONIAL HEIGHTS CITY	LDDT34	0.001	0.002	0.001
2002	COLONIAL HEIGHTS CITY	LDDT12	0.000	0.001	0.001
2002	COLONIAL HEIGHTS CITY	HDGV8b	0.000	0.000	0.000
2002	COLONIAL HEIGHTS CITY	HDGV8a	0.000	0.000	0.000
2002	COLONIAL HEIGHTS CITY	HDGV7	0.001	0.003	0.018
2002	COLONIAL HEIGHTS CITY	HDGV6	0.002	0.007	0.027
2002	COLONIAL HEIGHTS CITY	HDGV5	0.001	0.003	0.012
2002	COLONIAL HEIGHTS CITY	HDGV4	0.001	0.001	0.010
2002	COLONIAL HEIGHTS CITY	HDGV3	0.001	0.003	0.017
2002	COLONIAL HEIGHTS CITY	HDGV2b	0.015	0.064	0.211

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2002	COLONIAL HEIGHTS CITY	HDGB	0.001	0.001	0.017
2002	COLONIAL HEIGHTS CITY	HDDV8b	0.011	0.443	0.076
2002	COLONIAL HEIGHTS CITY	HDDV8a	0.003	0.108	0.016
2002	COLONIAL HEIGHTS CITY	HDDV7	0.002	0.058	0.009
2002	COLONIAL HEIGHTS CITY	HDDV6	0.001	0.032	0.005
2002	COLONIAL HEIGHTS CITY	HDDV5	0.000	0.004	0.001
2002	COLONIAL HEIGHTS CITY	HDDV4	0.000	0.008	0.001
2002	COLONIAL HEIGHTS CITY	HDDV3	0.000	0.008	0.002
2002	COLONIAL HEIGHTS CITY	HDDV2b	0.001	0.024	0.004
2002	COLONIAL HEIGHTS CITY	HDBT	0.000	0.010	0.002
2002	COLONIAL HEIGHTS CITY	HDBS	0.000	0.012	0.002
	TOTAL for COLONIAL HEIGHTS CITY		1.129	1.653	13.938
2002	HANOVER COUNTY	MC	0.039	0.017	0.238
2002	HANOVER COUNTY	LDGV	3.135	2.652	40.470
2002	HANOVER COUNTY	LDGT4	0.382	0.289	5.096
2002	HANOVER COUNTY	LDGT3	0.819	0.530	11.011
2002	HANOVER COUNTY	LDGT2	1.495	1.523	22.193
2002	HANOVER COUNTY	LDGT1	0.441	0.385	6.591
2002	HANOVER COUNTY	LDDV	0.003	0.007	0.006
2002	HANOVER COUNTY	LDDT34	0.004	0.011	0.007
2002	HANOVER COUNTY	LDDT12	0.002	0.003	0.004
2002	HANOVER COUNTY	HDGV8b	0.000	0.000	0.000
2002	HANOVER COUNTY	HDGV8a	0.000	0.000	0.000
2002	HANOVER COUNTY	HDGV7	0.008	0.033	0.121
2002	HANOVER COUNTY	HDGV6	0.014	0.066	0.189
2002	HANOVER COUNTY	HDGV5	0.006	0.031	0.087
2002	HANOVER COUNTY	HDGV4	0.005	0.013	0.065
2002	HANOVER COUNTY	HDGV3	0.006	0.026	0.114
2002	HANOVER COUNTY	HDGV2b	0.112	0.658	1.537
2002	HANOVER COUNTY	HDGB	0.006	0.014	0.114
2002	HANOVER COUNTY	HDDV8b	0.095	4.313	0.609
2002	HANOVER COUNTY	HDDV8a	0.022	1.058	0.132
2002	HANOVER COUNTY	HDDV7	0.019	0.556	0.072
2002	HANOVER COUNTY	HDDV6	0.010	0.303	0.038
2002	HANOVER COUNTY	HDDV5	0.001	0.037	0.006
2002	HANOVER COUNTY	HDDV4	0.003	0.079	0.013
2002	HANOVER COUNTY	HDDV3	0.003	0.078	0.013
2002	HANOVER COUNTY	HDDV2b	0.008	0.224	0.038

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2002	HANOVER COUNTY	HDBBT	0.002	0.093	0.016
2002	HANOVER COUNTY	HDDBS	0.004	0.113	0.015
	<i>TOTAL for HANOVER COUNTY</i>		6.644	13.110	88.795
2002	HENRICO COUNTY	MC	0.087	0.032	0.565
2002	HENRICO COUNTY	LDGV	5.985	5.197	74.507
2002	HENRICO COUNTY	LDGT4	0.702	0.570	9.185
2002	HENRICO COUNTY	LDGT3	1.501	1.025	19.819
2002	HENRICO COUNTY	LDGT2	2.930	3.030	42.194
2002	HENRICO COUNTY	LDGT1	0.861	0.755	12.503
2002	HENRICO COUNTY	LDDV	0.005	0.011	0.012
2002	HENRICO COUNTY	LDDT34	0.009	0.024	0.016
2002	HENRICO COUNTY	LDDT12	0.004	0.006	0.007
2002	HENRICO COUNTY	HDGV8b	0.000	0.000	0.000
2002	HENRICO COUNTY	HDGV8a	0.000	0.000	0.000
2002	HENRICO COUNTY	HDGV7	0.009	0.035	0.134
2002	HENRICO COUNTY	HDGV6	0.015	0.072	0.214
2002	HENRICO COUNTY	HDGV5	0.007	0.034	0.100
2002	HENRICO COUNTY	HDGV4	0.005	0.013	0.069
2002	HENRICO COUNTY	HDGV3	0.007	0.028	0.125
2002	HENRICO COUNTY	HDGV2b	0.131	0.758	1.857
2002	HENRICO COUNTY	HDGB	0.007	0.013	0.128
2002	HENRICO COUNTY	HDDV8b	0.122	5.033	0.765
2002	HENRICO COUNTY	HDDV8a	0.029	1.240	0.170
2002	HENRICO COUNTY	HDDV7	0.025	0.685	0.095
2002	HENRICO COUNTY	HDDV6	0.014	0.375	0.051
2002	HENRICO COUNTY	HDDV5	0.002	0.048	0.008
2002	HENRICO COUNTY	HDDV4	0.004	0.100	0.018
2002	HENRICO COUNTY	HDDV3	0.004	0.096	0.018
2002	HENRICO COUNTY	HDDV2b	0.011	0.277	0.051
2002	HENRICO COUNTY	HDBBT	0.002	0.114	0.020
2002	HENRICO COUNTY	HDDBS	0.006	0.147	0.020
	<i>TOTAL for HENRICO COUNTY</i>		12.481	19.719	162.650
2002	HOPEWELL CITY	MC	0.004	0.001	0.026
2002	HOPEWELL CITY	LDGV	0.382	0.287	3.940
2002	HOPEWELL CITY	LDGT4	0.055	0.031	0.638
2002	HOPEWELL CITY	LDGT3	0.120	0.060	1.381
2002	HOPEWELL CITY	LDGT2	0.204	0.162	2.376

TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2002	HOPEWELL CITY	LDGT1	0.060	0.042	0.702
2002	HOPEWELL CITY	LDDV	0.000	0.001	0.001
2002	HOPEWELL CITY	LDDT34	0.000	0.001	0.001
2002	HOPEWELL CITY	LDDT12	0.000	0.000	0.001
2002	HOPEWELL CITY	HDGV8b	0.000	0.000	0.000
2002	HOPEWELL CITY	HDGV8a	0.000	0.000	0.000
2002	HOPEWELL CITY	HDGV7	0.001	0.002	0.011
2002	HOPEWELL CITY	HDGV6	0.001	0.004	0.017
2002	HOPEWELL CITY	HDGV5	0.001	0.002	0.008
2002	HOPEWELL CITY	HDGV4	0.000	0.001	0.006
2002	HOPEWELL CITY	HDGV3	0.001	0.001	0.011
2002	HOPEWELL CITY	HDGV2b	0.010	0.033	0.126
2002	HOPEWELL CITY	HDGB	0.001	0.001	0.010
2002	HOPEWELL CITY	HDDV8b	0.007	0.215	0.046
2002	HOPEWELL CITY	HDDV8a	0.002	0.053	0.010
2002	HOPEWELL CITY	HDDV7	0.001	0.029	0.005
2002	HOPEWELL CITY	HDDV6	0.001	0.015	0.003
2002	HOPEWELL CITY	HDDV5	0.000	0.002	0.000
2002	HOPEWELL CITY	HDDV4	0.000	0.004	0.001
2002	HOPEWELL CITY	HDDV3	0.000	0.004	0.001
2002	HOPEWELL CITY	HDDV2b	0.001	0.012	0.003
2002	HOPEWELL CITY	HDDBT	0.000	0.005	0.001
2002	HOPEWELL CITY	HDDBS	0.000	0.006	0.001
	TOTAL for HOPEWELL CITY		0.852	0.974	9.327
2002	PETERSBURG CITY	MC	0.011	0.004	0.068
2002	PETERSBURG CITY	LDGV	1.263	0.835	13.435
2002	PETERSBURG CITY	LDGT4	0.205	0.095	2.537
2002	PETERSBURG CITY	LDGT3	0.442	0.183	5.501
2002	PETERSBURG CITY	LDGT2	0.678	0.464	8.260
2002	PETERSBURG CITY	LDGT1	0.201	0.123	2.473
2002	PETERSBURG CITY	LDDV	0.001	0.002	0.002
2002	PETERSBURG CITY	LDDT34	0.001	0.003	0.002
2002	PETERSBURG CITY	LDDT12	0.001	0.002	0.002
2002	PETERSBURG CITY	HDGV8b	0.000	0.000	0.000
2002	PETERSBURG CITY	HDGV8a	0.000	0.000	0.000
2002	PETERSBURG CITY	HDGV7	0.003	0.006	0.040
2002	PETERSBURG CITY	HDGV6	0.004	0.011	0.058
2002	PETERSBURG CITY	HDGV5	0.002	0.005	0.026

TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2002	PETERSBURG CITY	HDGV4	0.002	0.003	0.022
2002	PETERSBURG CITY	HDGV3	0.002	0.005	0.037
2002	PETERSBURG CITY	HDGV2b	0.033	0.105	0.428
2002	PETERSBURG CITY	HDGB	0.002	0.003	0.036
2002	PETERSBURG CITY	HDDV8b	0.019	0.657	0.126
2002	PETERSBURG CITY	HDDV8a	0.004	0.160	0.026
2002	PETERSBURG CITY	HDDV7	0.003	0.085	0.014
2002	PETERSBURG CITY	HDDV6	0.002	0.045	0.007
2002	PETERSBURG CITY	HDDV5	0.000	0.005	0.001
2002	PETERSBURG CITY	HDDV4	0.000	0.012	0.002
2002	PETERSBURG CITY	HDDV3	0.001	0.012	0.002
2002	PETERSBURG CITY	HDDV2b	0.002	0.035	0.007
2002	PETERSBURG CITY	HDBBT	0.000	0.014	0.003
2002	PETERSBURG CITY	HDDBS	0.001	0.016	0.003
	TOTAL for PETERSBURG CITY		2.883	2.889	33.119
2002	PRINCE GEORGE COUNTY	MC	0.014	0.006	0.102
2002	PRINCE GEORGE COUNTY	LDGV	1.300	1.025	17.845
2002	PRINCE GEORGE COUNTY	LDGT4	0.181	0.113	2.532
2002	PRINCE GEORGE COUNTY	LDGT3	0.389	0.210	5.481
2002	PRINCE GEORGE COUNTY	LDGT2	0.672	0.588	10.210
2002	PRINCE GEORGE COUNTY	LDGT1	0.200	0.155	3.087
2002	PRINCE GEORGE COUNTY	LDDV	0.001	0.003	0.002
2002	PRINCE GEORGE COUNTY	LDDT34	0.001	0.004	0.002
2002	PRINCE GEORGE COUNTY	LDDT12	0.001	0.002	0.002
2002	PRINCE GEORGE COUNTY	HDGV8b	0.000	0.000	0.000
2002	PRINCE GEORGE COUNTY	HDGV8a	0.000	0.000	0.000
2002	PRINCE GEORGE COUNTY	HDGV7	0.005	0.013	0.085
2002	PRINCE GEORGE COUNTY	HDGV6	0.008	0.026	0.125
2002	PRINCE GEORGE COUNTY	HDGV5	0.004	0.012	0.056
2002	PRINCE GEORGE COUNTY	HDGV4	0.003	0.006	0.046
2002	PRINCE GEORGE COUNTY	HDGV3	0.004	0.011	0.081
2002	PRINCE GEORGE COUNTY	HDGV2b	0.060	0.245	0.944
2002	PRINCE GEORGE COUNTY	HDGB	0.003	0.006	0.078
2002	PRINCE GEORGE COUNTY	HDDV8b	0.035	1.720	0.254
2002	PRINCE GEORGE COUNTY	HDDV8a	0.008	0.419	0.054
2002	PRINCE GEORGE COUNTY	HDDV7	0.007	0.223	0.028
2002	PRINCE GEORGE COUNTY	HDDV6	0.003	0.120	0.015
2002	PRINCE GEORGE COUNTY	HDDV5	0.000	0.014	0.002

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2002	PRINCE GEORGE COUNTY	HDDV4	0.001	0.031	0.005
2002	PRINCE GEORGE COUNTY	HDDV3	0.001	0.031	0.005
2002	PRINCE GEORGE COUNTY	HDDV2b	0.003	0.091	0.014
2002	PRINCE GEORGE COUNTY	HDBBT	0.001	0.039	0.007
2002	PRINCE GEORGE COUNTY	HDDBS	0.001	0.043	0.005
	<i>TOTAL for PRINCE GEORGE COUNTY</i>		2.905	5.156	41.068
2002	RICHMOND CITY	MC	0.062	0.020	0.374
2002	RICHMOND CITY	LDGV	5.087	3.958	54.605
2002	RICHMOND CITY	LDGT4	0.717	0.442	8.451
2002	RICHMOND CITY	LDGT3	1.542	0.829	18.286
2002	RICHMOND CITY	LDGT2	2.640	2.297	32.573
2002	RICHMOND CITY	LDGT1	0.778	0.585	9.611
2002	RICHMOND CITY	LDDV	0.005	0.010	0.011
2002	RICHMOND CITY	LDDT34	0.007	0.015	0.012
2002	RICHMOND CITY	LDDT12	0.005	0.005	0.008
2002	RICHMOND CITY	HDGV8b	0.000	0.000	0.000
2002	RICHMOND CITY	HDGV8a	0.000	0.000	0.000
2002	RICHMOND CITY	HDGV7	0.005	0.022	0.068
2002	RICHMOND CITY	HDGV6	0.010	0.045	0.115
2002	RICHMOND CITY	HDGV5	0.005	0.021	0.054
2002	RICHMOND CITY	HDGV4	0.003	0.008	0.033
2002	RICHMOND CITY	HDGV3	0.004	0.017	0.061
2002	RICHMOND CITY	HDGV2b	0.088	0.468	1.016
2002	RICHMOND CITY	HDGB	0.003	0.007	0.055
2002	RICHMOND CITY	HDDV8b	0.083	2.972	0.498
2002	RICHMOND CITY	HDDV8a	0.020	0.728	0.111
2002	RICHMOND CITY	HDDV7	0.017	0.383	0.061
2002	RICHMOND CITY	HDDV6	0.009	0.209	0.033
2002	RICHMOND CITY	HDDV5	0.001	0.027	0.005
2002	RICHMOND CITY	HDDV4	0.003	0.056	0.011
2002	RICHMOND CITY	HDDV3	0.003	0.053	0.011
2002	RICHMOND CITY	HDDV2b	0.008	0.156	0.032
2002	RICHMOND CITY	HDBBT	0.002	0.064	0.013
2002	RICHMOND CITY	HDDBS	0.004	0.083	0.013
	<i>TOTAL for RICHMOND CITY</i>		11.110	13.479	126.120
	<i>2002 GRAND TOTAL</i>		50.200	74.130	638.216

TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2005	CHARLES CITY COUNTY	MC	0.003	0.001	0.013
2005	CHARLES CITY COUNTY	LDGV	0.232	0.181	2.455
2005	CHARLES CITY COUNTY	LDGT4	0.019	0.018	0.216
2005	CHARLES CITY COUNTY	LDGT3	0.041	0.032	0.465
2005	CHARLES CITY COUNTY	LDGT2	0.129	0.107	1.492
2005	CHARLES CITY COUNTY	LDGT1	0.038	0.027	0.437
2005	CHARLES CITY COUNTY	LDDV	0.000	0.001	0.001
2005	CHARLES CITY COUNTY	LDDT34	0.000	0.001	0.000
2005	CHARLES CITY COUNTY	LDDT12	0.000	0.000	0.001
2005	CHARLES CITY COUNTY	HDGV8b	0.000	0.000	0.000
2005	CHARLES CITY COUNTY	HDGV8a	0.000	0.000	0.000
2005	CHARLES CITY COUNTY	HDGV7	0.000	0.001	0.003
2005	CHARLES CITY COUNTY	HDGV6	0.000	0.002	0.005
2005	CHARLES CITY COUNTY	HDGV5	0.000	0.001	0.003
2005	CHARLES CITY COUNTY	HDGV4	0.000	0.000	0.002
2005	CHARLES CITY COUNTY	HDGV3	0.000	0.001	0.004
2005	CHARLES CITY COUNTY	HDGV2b	0.005	0.024	0.051
2005	CHARLES CITY COUNTY	HDGB	0.000	0.000	0.003
2005	CHARLES CITY COUNTY	HDDV8b	0.003	0.098	0.020
2005	CHARLES CITY COUNTY	HDDV8a	0.001	0.024	0.004
2005	CHARLES CITY COUNTY	HDDV7	0.001	0.016	0.003
2005	CHARLES CITY COUNTY	HDDV6	0.000	0.009	0.001
2005	CHARLES CITY COUNTY	HDDV5	0.000	0.001	0.000
2005	CHARLES CITY COUNTY	HDDV4	0.000	0.002	0.000
2005	CHARLES CITY COUNTY	HDDV3	0.000	0.002	0.000
2005	CHARLES CITY COUNTY	HDDV2b	0.000	0.007	0.001
2005	CHARLES CITY COUNTY	HDBT	0.000	0.003	0.001
2005	CHARLES CITY COUNTY	HDBS	0.000	0.004	0.001
	<i>TOTAL for CHARLES CITY COUNTY</i>		<i>0.475</i>	<i>0.563</i>	<i>5.182</i>
2005	CHESTERFIELD COUNTY	MC	0.072	0.027	0.425
2005	CHESTERFIELD COUNTY	LDGV	5.468	5.091	66.020
2005	CHESTERFIELD COUNTY	LDGT4	0.411	0.569	5.220
2005	CHESTERFIELD COUNTY	LDGT3	0.852	0.939	11.156
2005	CHESTERFIELD COUNTY	LDGT2	2.860	3.126	37.454
2005	CHESTERFIELD COUNTY	LDGT1	0.833	0.757	10.927
2005	CHESTERFIELD COUNTY	LDDV	0.008	0.016	0.019
2005	CHESTERFIELD COUNTY	LDDT34	0.009	0.020	0.015

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2005	CHESTERFIELD COUNTY	LDDT12	0.004	0.005	0.008
2005	CHESTERFIELD COUNTY	HDGV8b	0.000	0.000	0.000
2005	CHESTERFIELD COUNTY	HDGV8a	0.000	0.000	0.000
2005	CHESTERFIELD COUNTY	HDGV7	0.007	0.027	0.077
2005	CHESTERFIELD COUNTY	HDGV6	0.013	0.057	0.145
2005	CHESTERFIELD COUNTY	HDGV5	0.007	0.027	0.072
2005	CHESTERFIELD COUNTY	HDGV4	0.004	0.010	0.045
2005	CHESTERFIELD COUNTY	HDGV3	0.007	0.025	0.097
2005	CHESTERFIELD COUNTY	HDGV2b	0.131	0.630	1.463
2005	CHESTERFIELD COUNTY	HDGB	0.005	0.011	0.082
2005	CHESTERFIELD COUNTY	HDDV8b	0.108	2.876	0.633
2005	CHESTERFIELD COUNTY	HDDV8a	0.026	0.694	0.142
2005	CHESTERFIELD COUNTY	HDDV7	0.022	0.438	0.082
2005	CHESTERFIELD COUNTY	HDDV6	0.012	0.241	0.045
2005	CHESTERFIELD COUNTY	HDDV5	0.002	0.034	0.008
2005	CHESTERFIELD COUNTY	HDDV4	0.004	0.069	0.016
2005	CHESTERFIELD COUNTY	HDDV3	0.003	0.062	0.015
2005	CHESTERFIELD COUNTY	HDDV2b	0.009	0.180	0.043
2005	CHESTERFIELD COUNTY	HDDBT	0.002	0.079	0.018
2005	CHESTERFIELD COUNTY	HDDBS	0.005	0.103	0.019
TOTAL for CHESTERFIELD COUNTY			10.883	16.111	134.246
2005	COLONIAL HEIGHTS CITY	MC	0.006	0.002	0.040
2005	COLONIAL HEIGHTS CITY	LDGV	0.464	0.385	4.810
2005	COLONIAL HEIGHTS CITY	LDGT4	0.035	0.041	0.392
2005	COLONIAL HEIGHTS CITY	LDGT3	0.073	0.069	0.839
2005	COLONIAL HEIGHTS CITY	LDGT2	0.246	0.231	2.799
2005	COLONIAL HEIGHTS CITY	LDGT1	0.072	0.057	0.818
2005	COLONIAL HEIGHTS CITY	LDDV	0.001	0.001	0.002
2005	COLONIAL HEIGHTS CITY	LDDT34	0.001	0.001	0.001
2005	COLONIAL HEIGHTS CITY	LDDT12	0.000	0.000	0.001
2005	COLONIAL HEIGHTS CITY	HDGV8b	0.000	0.000	0.000
2005	COLONIAL HEIGHTS CITY	HDGV8a	0.000	0.000	0.000
2005	COLONIAL HEIGHTS CITY	HDGV7	0.001	0.003	0.009
2005	COLONIAL HEIGHTS CITY	HDGV6	0.001	0.005	0.016
2005	COLONIAL HEIGHTS CITY	HDGV5	0.001	0.002	0.008
2005	COLONIAL HEIGHTS CITY	HDGV4	0.000	0.001	0.005
2005	COLONIAL HEIGHTS CITY	HDGV3	0.001	0.002	0.012
2005	COLONIAL HEIGHTS CITY	HDGV2b	0.014	0.057	0.157

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2005	COLONIAL HEIGHTS CITY	HDGB	0.001	0.001	0.010
2005	COLONIAL HEIGHTS CITY	HDDV8b	0.011	0.265	0.064
2005	COLONIAL HEIGHTS CITY	HDDV8a	0.003	0.064	0.014
2005	COLONIAL HEIGHTS CITY	HDDV7	0.002	0.040	0.008
2005	COLONIAL HEIGHTS CITY	HDDV6	0.001	0.022	0.004
2005	COLONIAL HEIGHTS CITY	HDDV5	0.000	0.003	0.001
2005	COLONIAL HEIGHTS CITY	HDDV4	0.000	0.006	0.002
2005	COLONIAL HEIGHTS CITY	HDDV3	0.000	0.005	0.001
2005	COLONIAL HEIGHTS CITY	HDDV2b	0.001	0.016	0.004
2005	COLONIAL HEIGHTS CITY	HDBT	0.000	0.007	0.002
2005	COLONIAL HEIGHTS CITY	HDBS	0.001	0.009	0.002
<i>TOTAL for COLONIAL HEIGHTS CITY</i>			0.936	1.297	10.021
2005	HANOVER COUNTY	MC	0.044	0.020	0.291
2005	HANOVER COUNTY	LDGV	2.662	2.575	37.392
2005	HANOVER COUNTY	LDGT4	0.201	0.288	2.928
2005	HANOVER COUNTY	LDGT3	0.419	0.481	6.270
2005	HANOVER COUNTY	LDGT2	1.397	1.601	21.004
2005	HANOVER COUNTY	LDGT1	0.409	0.392	6.172
2005	HANOVER COUNTY	LDDV	0.005	0.013	0.012
2005	HANOVER COUNTY	LDDT34	0.004	0.013	0.007
2005	HANOVER COUNTY	LDDT12	0.002	0.003	0.004
2005	HANOVER COUNTY	HDGV8b	0.000	0.000	0.000
2005	HANOVER COUNTY	HDGV8a	0.000	0.000	0.000
2005	HANOVER COUNTY	HDGV7	0.005	0.029	0.081
2005	HANOVER COUNTY	HDGV6	0.010	0.061	0.151
2005	HANOVER COUNTY	HDGV5	0.005	0.029	0.075
2005	HANOVER COUNTY	HDGV4	0.003	0.011	0.047
2005	HANOVER COUNTY	HDGV3	0.005	0.027	0.100
2005	HANOVER COUNTY	HDGV2b	0.100	0.676	1.518
2005	HANOVER COUNTY	HDGB	0.004	0.011	0.083
2005	HANOVER COUNTY	HDDV8b	0.083	3.804	0.581
2005	HANOVER COUNTY	HDDV8a	0.020	0.923	0.130
2005	HANOVER COUNTY	HDDV7	0.017	0.589	0.075
2005	HANOVER COUNTY	HDDV6	0.010	0.324	0.041
2005	HANOVER COUNTY	HDDV5	0.001	0.045	0.007
2005	HANOVER COUNTY	HDDV4	0.003	0.092	0.015
2005	HANOVER COUNTY	HDDV3	0.002	0.082	0.014
2005	HANOVER COUNTY	HDDV2b	0.007	0.241	0.039

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2005	HANOVER COUNTY	HDBBT	0.002	0.104	0.016
2005	HANOVER COUNTY	HDDBS	0.004	0.138	0.017
	<i>TOTAL for HANOVER COUNTY</i>		5.426	12.572	77.071
2005	HENRICO COUNTY	MC	0.094	0.034	0.590
2005	HENRICO COUNTY	LDGV	5.540	5.068	65.493
2005	HENRICO COUNTY	LDGT4	0.407	0.565	5.167
2005	HENRICO COUNTY	LDGT3	0.841	0.930	11.039
2005	HENRICO COUNTY	LDGT2	2.820	3.088	36.968
2005	HENRICO COUNTY	LDGT1	0.820	0.746	10.785
2005	HENRICO COUNTY	LDVV	0.007	0.015	0.017
2005	HENRICO COUNTY	LDDT34	0.009	0.021	0.016
2005	HENRICO COUNTY	LDDT12	0.004	0.004	0.007
2005	HENRICO COUNTY	HDGV8b	0.000	0.000	0.000
2005	HENRICO COUNTY	HDGV8a	0.000	0.000	0.000
2005	HENRICO COUNTY	HDGV7	0.007	0.033	0.090
2005	HENRICO COUNTY	HDGV6	0.014	0.070	0.173
2005	HENRICO COUNTY	HDGV5	0.007	0.033	0.085
2005	HENRICO COUNTY	HDGV4	0.004	0.011	0.049
2005	HENRICO COUNTY	HDGV3	0.007	0.030	0.109
2005	HENRICO COUNTY	HDGV2b	0.140	0.788	1.796
2005	HENRICO COUNTY	HDGB	0.005	0.012	0.089
2005	HENRICO COUNTY	HDDV8b	0.128	3.896	0.778
2005	HENRICO COUNTY	HDDV8a	0.031	0.946	0.178
2005	HENRICO COUNTY	HDDV7	0.027	0.601	0.103
2005	HENRICO COUNTY	HDDV6	0.015	0.332	0.057
2005	HENRICO COUNTY	HDDV5	0.002	0.047	0.010
2005	HENRICO COUNTY	HDDV4	0.004	0.095	0.021
2005	HENRICO COUNTY	HDDV3	0.004	0.085	0.019
2005	HENRICO COUNTY	HDDV2b	0.011	0.248	0.055
2005	HENRICO COUNTY	HDBBT	0.002	0.104	0.021
2005	HENRICO COUNTY	HDDBS	0.007	0.144	0.024
	<i>TOTAL for HENRICO COUNTY</i>		10.957	17.947	133.740
2005	HOPEWELL CITY	MC	0.005	0.002	0.032
2005	HOPEWELL CITY	LDGV	0.436	0.343	4.191
2005	HOPEWELL CITY	LDGT4	0.036	0.035	0.368
2005	HOPEWELL CITY	LDGT3	0.076	0.062	0.791
2005	HOPEWELL CITY	LDGT2	0.254	0.208	2.604

TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2005	HOPEWELL CITY	LDGT1	0.074	0.052	0.761
2005	HOPEWELL CITY	LDDV	0.001	0.001	0.002
2005	HOPEWELL CITY	LDDT34	0.001	0.001	0.001
2005	HOPEWELL CITY	LDDT12	0.000	0.000	0.001
2005	HOPEWELL CITY	HDGV8b	0.000	0.000	0.000
2005	HOPEWELL CITY	HDGV8a	0.000	0.000	0.000
2005	HOPEWELL CITY	HDGV7	0.001	0.002	0.009
2005	HOPEWELL CITY	HDGV6	0.001	0.004	0.016
2005	HOPEWELL CITY	HDGV5	0.001	0.002	0.008
2005	HOPEWELL CITY	HDGV4	0.001	0.001	0.006
2005	HOPEWELL CITY	HDGV3	0.001	0.002	0.012
2005	HOPEWELL CITY	HDGV2b	0.013	0.042	0.146
2005	HOPEWELL CITY	HDGB	0.001	0.001	0.010
2005	HOPEWELL CITY	HDDV8b	0.009	0.207	0.057
2005	HOPEWELL CITY	HDDV8a	0.002	0.050	0.012
2005	HOPEWELL CITY	HDDV7	0.002	0.030	0.007
2005	HOPEWELL CITY	HDDV6	0.001	0.017	0.004
2005	HOPEWELL CITY	HDDV5	0.000	0.002	0.001
2005	HOPEWELL CITY	HDDV4	0.000	0.005	0.001
2005	HOPEWELL CITY	HDDV3	0.000	0.004	0.001
2005	HOPEWELL CITY	HDDV2b	0.001	0.013	0.004
2005	HOPEWELL CITY	HDDBT	0.000	0.005	0.002
2005	HOPEWELL CITY	HDDBS	0.000	0.007	0.002
TOTAL for HOPEWELL CITY			0.918	1.097	9.048
2005	PETERSBURG CITY	MC	0.012	0.003	0.085
2005	PETERSBURG CITY	LDGV	1.286	0.753	9.645
2005	PETERSBURG CITY	LDGT4	0.103	0.075	0.914
2005	PETERSBURG CITY	LDGT3	0.219	0.131	1.969
2005	PETERSBURG CITY	LDGT2	0.704	0.438	6.187
2005	PETERSBURG CITY	LDGT1	0.207	0.110	1.817
2005	PETERSBURG CITY	LDDV	0.001	0.003	0.003
2005	PETERSBURG CITY	LDDT34	0.001	0.003	0.003
2005	PETERSBURG CITY	LDDT12	0.001	0.001	0.003
2005	PETERSBURG CITY	HDGV8b	0.000	0.000	0.000
2005	PETERSBURG CITY	HDGV8a	0.000	0.000	0.000
2005	PETERSBURG CITY	HDGV7	0.002	0.004	0.026
2005	PETERSBURG CITY	HDGV6	0.004	0.008	0.045
2005	PETERSBURG CITY	HDGV5	0.002	0.004	0.022

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2005	PETERSBURG CITY	HDGV4	0.001	0.002	0.017
2005	PETERSBURG CITY	HDGV3	0.002	0.004	0.035
2005	PETERSBURG CITY	HDGV2b	0.038	0.080	0.414
2005	PETERSBURG CITY	HDGB	0.002	0.002	0.029
2005	PETERSBURG CITY	HDDV8b	0.019	0.414	0.130
2005	PETERSBURG CITY	HDDV8a	0.004	0.099	0.028
2005	PETERSBURG CITY	HDDV7	0.004	0.060	0.015
2005	PETERSBURG CITY	HDDV6	0.002	0.033	0.008
2005	PETERSBURG CITY	HDDV5	0.000	0.004	0.001
2005	PETERSBURG CITY	HDDV4	0.001	0.009	0.003
2005	PETERSBURG CITY	HDDV3	0.001	0.008	0.003
2005	PETERSBURG CITY	HDDV2b	0.002	0.024	0.008
2005	PETERSBURG CITY	HDBBT	0.000	0.010	0.003
2005	PETERSBURG CITY	HDDBS	0.001	0.013	0.003
TOTAL for PETERSBURG CITY			2.621	2.295	21.417
2005	PRINCE GEORGE COUNTY	MC	0.013	0.006	0.089
2005	PRINCE GEORGE COUNTY	LDGV	1.030	0.851	13.224
2005	PRINCE GEORGE COUNTY	LDGT4	0.083	0.095	1.125
2005	PRINCE GEORGE COUNTY	LDGT3	0.174	0.162	2.416
2005	PRINCE GEORGE COUNTY	LDGT2	0.583	0.543	8.021
2005	PRINCE GEORGE COUNTY	LDGT1	0.171	0.135	2.362
2005	PRINCE GEORGE COUNTY	LDDV	0.001	0.004	0.003
2005	PRINCE GEORGE COUNTY	LDDT34	0.001	0.004	0.002
2005	PRINCE GEORGE COUNTY	LDDT12	0.001	0.001	0.002
2005	PRINCE GEORGE COUNTY	HDGV8b	0.000	0.000	0.000
2005	PRINCE GEORGE COUNTY	HDGV8a	0.000	0.000	0.000
2005	PRINCE GEORGE COUNTY	HDGV7	0.003	0.010	0.041
2005	PRINCE GEORGE COUNTY	HDGV6	0.005	0.021	0.073
2005	PRINCE GEORGE COUNTY	HDGV5	0.003	0.010	0.036
2005	PRINCE GEORGE COUNTY	HDGV4	0.002	0.004	0.026
2005	PRINCE GEORGE COUNTY	HDGV3	0.003	0.009	0.054
2005	PRINCE GEORGE COUNTY	HDGV2b	0.049	0.217	0.685
2005	PRINCE GEORGE COUNTY	HDGB	0.002	0.005	0.045
2005	PRINCE GEORGE COUNTY	HDDV8b	0.027	1.215	0.196
2005	PRINCE GEORGE COUNTY	HDDV8a	0.006	0.292	0.042
2005	PRINCE GEORGE COUNTY	HDDV7	0.005	0.181	0.024
2005	PRINCE GEORGE COUNTY	HDDV6	0.003	0.099	0.013
2005	PRINCE GEORGE COUNTY	HDDV5	0.000	0.013	0.002

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2005	PRINCE GEORGE COUNTY	HDDV4	0.001	0.028	0.004
2005	PRINCE GEORGE COUNTY	HDDV3	0.001	0.025	0.004
2005	PRINCE GEORGE COUNTY	HDDV2b	0.002	0.074	0.012
2005	PRINCE GEORGE COUNTY	HDBT	0.001	0.033	0.006
2005	PRINCE GEORGE COUNTY	HDBS	0.001	0.040	0.005
<i>TOTAL for PRINCE GEORGE COUNTY</i>			2.171	4.077	28.511
2005	RICHMOND CITY	MC	0.072	0.021	0.451
2005	RICHMOND CITY	LDGV	4.456	3.595	42.487
2005	RICHMOND CITY	LDGT4	0.351	0.386	3.640
2005	RICHMOND CITY	LDGT3	0.735	0.651	7.799
2005	RICHMOND CITY	LDGT2	2.496	2.239	26.232
2005	RICHMOND CITY	LDGT1	0.728	0.548	7.619
2005	RICHMOND CITY	LDDV	0.006	0.011	0.015
2005	RICHMOND CITY	LDDT34	0.007	0.014	0.013
2005	RICHMOND CITY	LDDT12	0.004	0.004	0.008
2005	RICHMOND CITY	HDGV8b	0.000	0.000	0.000
2005	RICHMOND CITY	HDGV8a	0.000	0.000	0.000
2005	RICHMOND CITY	HDGV7	0.005	0.016	0.051
2005	RICHMOND CITY	HDGV6	0.009	0.035	0.101
2005	RICHMOND CITY	HDGV5	0.004	0.016	0.048
2005	RICHMOND CITY	HDGV4	0.002	0.005	0.025
2005	RICHMOND CITY	HDGV3	0.004	0.014	0.058
2005	RICHMOND CITY	HDGV2b	0.096	0.386	1.042
2005	RICHMOND CITY	HDGB	0.003	0.005	0.041
2005	RICHMOND CITY	HDDV8b	0.084	1.954	0.503
2005	RICHMOND CITY	HDDV8a	0.020	0.472	0.115
2005	RICHMOND CITY	HDDV7	0.018	0.299	0.066
2005	RICHMOND CITY	HDDV6	0.010	0.164	0.036
2005	RICHMOND CITY	HDDV5	0.001	0.024	0.007
2005	RICHMOND CITY	HDDV4	0.003	0.047	0.013
2005	RICHMOND CITY	HDDV3	0.003	0.042	0.012
2005	RICHMOND CITY	HDDV2b	0.007	0.124	0.035
2005	RICHMOND CITY	HDBT	0.001	0.052	0.013
2005	RICHMOND CITY	HDBS	0.004	0.073	0.015
<i>TOTAL for RICHMOND CITY</i>			9.132	11.196	90.445
<i>2005 GRAND TOTAL</i>			43.518	67.155	509.681

TABLE 4.2-7 BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE					
YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2011	CHARLES CITY COUNTY	MC	0.003	0.001	0.014
2011	CHARLES CITY COUNTY	LDGV	0.179	0.128	1.793
2011	CHARLES CITY COUNTY	LDGT4	0.015	0.015	0.156
2011	CHARLES CITY COUNTY	LDGT3	0.032	0.026	0.335
2011	CHARLES CITY COUNTY	LDGT2	0.099	0.082	1.056
2011	CHARLES CITY COUNTY	LDGT1	0.029	0.019	0.292
2011	CHARLES CITY COUNTY	LDDV	0.000	0.000	0.000
2011	CHARLES CITY COUNTY	LDDT34	0.000	0.000	0.000
2011	CHARLES CITY COUNTY	LDDT12	0.000	0.000	0.000
2011	CHARLES CITY COUNTY	HDGV8b	0.000	0.000	0.000
2011	CHARLES CITY COUNTY	HDGV8a	0.000	0.000	0.000
2011	CHARLES CITY COUNTY	HDGV7	0.000	0.001	0.001
2011	CHARLES CITY COUNTY	HDGV6	0.000	0.001	0.003
2011	CHARLES CITY COUNTY	HDGV5	0.000	0.001	0.001
2011	CHARLES CITY COUNTY	HDGV4	0.000	0.000	0.000
2011	CHARLES CITY COUNTY	HDGV3	0.000	0.000	0.001
2011	CHARLES CITY COUNTY	HDGV2b	0.003	0.013	0.032
2011	CHARLES CITY COUNTY	HDGB	0.000	0.000	0.000
2011	CHARLES CITY COUNTY	HDDV8b	0.003	0.055	0.011
2011	CHARLES CITY COUNTY	HDDV8a	0.001	0.013	0.002
2011	CHARLES CITY COUNTY	HDDV7	0.000	0.009	0.001
2011	CHARLES CITY COUNTY	HDDV6	0.000	0.005	0.001
2011	CHARLES CITY COUNTY	HDDV5	0.000	0.001	0.000
2011	CHARLES CITY COUNTY	HDDV4	0.000	0.002	0.000
2011	CHARLES CITY COUNTY	HDDV3	0.000	0.001	0.000
2011	CHARLES CITY COUNTY	HDDV2b	0.000	0.004	0.001
2011	CHARLES CITY COUNTY	HDBDT	0.000	0.002	0.000
2011	CHARLES CITY COUNTY	HDBBS	0.000	0.003	0.000
TOTAL for CHARLES CITY COUNTY			0.366	0.382	3.706
2011	CHESTERFIELD COUNTY	MC	0.079	0.031	0.482
2011	CHESTERFIELD COUNTY	LDGV	3.840	3.085	45.171
2011	CHESTERFIELD COUNTY	LDGT4	0.307	0.376	3.665
2011	CHESTERFIELD COUNTY	LDGT3	0.630	0.614	7.795
2011	CHESTERFIELD COUNTY	LDGT2	2.065	2.035	26.265
2011	CHESTERFIELD COUNTY	LDGT1	0.589	0.461	7.175

TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2011	CHESTERFIELD COUNTY	LDDV	0.001	0.002	0.005
2011	CHESTERFIELD COUNTY	LDDT34	0.006	0.010	0.011
2011	CHESTERFIELD COUNTY	LDDT12	0.000	0.000	0.000
2011	CHESTERFIELD COUNTY	HDGV8b	0.000	0.000	0.000
2011	CHESTERFIELD COUNTY	HDGV8a	0.000	0.000	0.000
2011	CHESTERFIELD COUNTY	HDGV7	0.004	0.013	0.044
2011	CHESTERFIELD COUNTY	HDGV6	0.008	0.027	0.096
2011	CHESTERFIELD COUNTY	HDGV5	0.004	0.013	0.044
2011	CHESTERFIELD COUNTY	HDGV4	0.002	0.004	0.013
2011	CHESTERFIELD COUNTY	HDGV3	0.003	0.012	0.041
2011	CHESTERFIELD COUNTY	HDGV2b	0.093	0.335	1.058
2011	CHESTERFIELD COUNTY	HDGB	0.001	0.005	0.010
2011	CHESTERFIELD COUNTY	HDDV8b	0.087	1.534	0.344
2011	CHESTERFIELD COUNTY	HDDV8a	0.021	0.352	0.075
2011	CHESTERFIELD COUNTY	HDDV7	0.016	0.245	0.047
2011	CHESTERFIELD COUNTY	HDDV6	0.009	0.136	0.026
2011	CHESTERFIELD COUNTY	HDDV5	0.001	0.023	0.005
2011	CHESTERFIELD COUNTY	HDDV4	0.003	0.046	0.010
2011	CHESTERFIELD COUNTY	HDDV3	0.002	0.035	0.008
2011	CHESTERFIELD COUNTY	HDDV2b	0.007	0.109	0.024
2011	CHESTERFIELD COUNTY	HDDBT	0.002	0.053	0.011
2011	CHESTERFIELD COUNTY	HDDBS	0.005	0.082	0.015
TOTAL for CHESTERFIELD COUNTY			7.785	9.634	92.441
2011	COLONIAL HEIGHTS CITY	MC	0.007	0.002	0.045
2011	COLONIAL HEIGHTS CITY	LDGV	0.329	0.244	3.400
2011	COLONIAL HEIGHTS CITY	LDGT4	0.027	0.029	0.279
2011	COLONIAL HEIGHTS CITY	LDGT3	0.055	0.048	0.596
2011	COLONIAL HEIGHTS CITY	LDGT2	0.179	0.158	1.987
2011	COLONIAL HEIGHTS CITY	LDGT1	0.051	0.036	0.547
2011	COLONIAL HEIGHTS CITY	LDDV	0.000	0.000	0.000
2011	COLONIAL HEIGHTS CITY	LDDT34	0.000	0.001	0.001
2011	COLONIAL HEIGHTS CITY	LDDT12	0.000	0.000	0.000
2011	COLONIAL HEIGHTS CITY	HDGV8b	0.000	0.000	0.000
2011	COLONIAL HEIGHTS CITY	HDGV8a	0.000	0.000	0.000
2011	COLONIAL HEIGHTS CITY	HDGV7	0.000	0.001	0.004
2011	COLONIAL HEIGHTS CITY	HDGV6	0.001	0.003	0.009
2011	COLONIAL HEIGHTS CITY	HDGV5	0.000	0.001	0.004
2011	COLONIAL HEIGHTS CITY	HDGV4	0.000	0.000	0.001

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2011	COLONIAL HEIGHTS CITY	HDGV3	0.000	0.001	0.004
2011	COLONIAL HEIGHTS CITY	HDGV2b	0.010	0.031	0.103
2011	COLONIAL HEIGHTS CITY	HDGB	0.000	0.000	0.001
2011	COLONIAL HEIGHTS CITY	HDDV8b	0.008	0.146	0.036
2011	COLONIAL HEIGHTS CITY	HDDV8a	0.002	0.034	0.008
2011	COLONIAL HEIGHTS CITY	HDDV7	0.002	0.023	0.005
2011	COLONIAL HEIGHTS CITY	HDDV6	0.001	0.013	0.003
2011	COLONIAL HEIGHTS CITY	HDDV5	0.000	0.002	0.001
2011	COLONIAL HEIGHTS CITY	HDDV4	0.000	0.004	0.001
2011	COLONIAL HEIGHTS CITY	HDDV3	0.000	0.003	0.001
2011	COLONIAL HEIGHTS CITY	HDDV2b	0.001	0.010	0.002
2011	COLONIAL HEIGHTS CITY	HDDBT	0.000	0.005	0.001
2011	COLONIAL HEIGHTS CITY	HDDBS	0.000	0.008	0.002
TOTAL for COLONIAL HEIGHTS CITY			0.675	0.803	7.042
2011	HANOVER COUNTY	MC	0.049	0.023	0.338
2011	HANOVER COUNTY	LDGV	1.993	1.636	25.966
2011	HANOVER COUNTY	LDGT4	0.157	0.200	2.099
2011	HANOVER COUNTY	LDGT3	0.324	0.330	4.473
2011	HANOVER COUNTY	LDGT2	1.066	1.095	14.981
2011	HANOVER COUNTY	LDGT1	0.305	0.249	4.110
2011	HANOVER COUNTY	LDDV	0.000	0.001	0.003
2011	HANOVER COUNTY	LDDT34	0.003	0.006	0.005
2011	HANOVER COUNTY	LDDT12	0.000	0.000	0.000
2011	HANOVER COUNTY	HDGV8b	0.000	0.000	0.000
2011	HANOVER COUNTY	HDGV8a	0.000	0.000	0.000
2011	HANOVER COUNTY	HDGV7	0.003	0.014	0.047
2011	HANOVER COUNTY	HDGV6	0.007	0.030	0.103
2011	HANOVER COUNTY	HDGV5	0.003	0.014	0.048
2011	HANOVER COUNTY	HDGV4	0.001	0.004	0.013
2011	HANOVER COUNTY	HDGV3	0.002	0.013	0.044
2011	HANOVER COUNTY	HDDV2b	0.078	0.368	1.135
2011	HANOVER COUNTY	HDGB	0.001	0.005	0.010
2011	HANOVER COUNTY	HDDV8b	0.068	2.091	0.325
2011	HANOVER COUNTY	HDDV8a	0.016	0.481	0.071
2011	HANOVER COUNTY	HDDV7	0.013	0.338	0.045
2011	HANOVER COUNTY	HDDV6	0.007	0.187	0.025
2011	HANOVER COUNTY	HDDV5	0.001	0.031	0.005
2011	HANOVER COUNTY	HDDV4	0.002	0.063	0.010

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2011	HANOVER COUNTY	HDDV3	0.002	0.048	0.008
2011	HANOVER COUNTY	HDDV2b	0.006	0.150	0.023
2011	HANOVER COUNTY	HDBBT	0.001	0.071	0.010
2011	HANOVER COUNTY	HDBBS	0.004	0.113	0.014
	<i>TOTAL for HANOVER COUNTY</i>		4.113	7.561	53.909
2011	HENRICO COUNTY	MC	0.103	0.038	0.668
2011	HENRICO COUNTY	LDGV	3.836	3.079	45.253
2011	HENRICO COUNTY	LDGT4	0.301	0.370	3.626
2011	HENRICO COUNTY	LDGT3	0.617	0.603	7.711
2011	HENRICO COUNTY	LDGT2	2.014	1.989	25.932
2011	HENRICO COUNTY	LDGT1	0.574	0.449	7.086
2011	HENRICO COUNTY	LDDV	0.001	0.002	0.005
2011	HENRICO COUNTY	LDDT34	0.006	0.010	0.011
2011	HENRICO COUNTY	LDDT12	0.000	0.000	0.000
2011	HENRICO COUNTY	HDGV8b	0.000	0.000	0.000
2011	HENRICO COUNTY	HDGV8a	0.000	0.000	0.000
2011	HENRICO COUNTY	HDGV7	0.004	0.014	0.058
2011	HENRICO COUNTY	HDGV6	0.008	0.031	0.126
2011	HENRICO COUNTY	HDGV5	0.004	0.014	0.059
2011	HENRICO COUNTY	HDGV4	0.002	0.004	0.016
2011	HENRICO COUNTY	HDGV3	0.003	0.013	0.054
2011	HENRICO COUNTY	HDGV2b	0.098	0.382	1.400
2011	HENRICO COUNTY	HDGB	0.001	0.005	0.012
2011	HENRICO COUNTY	HDDV8b	0.103	1.978	0.420
2011	HENRICO COUNTY	HDDV8a	0.025	0.458	0.093
2011	HENRICO COUNTY	HDDV7	0.019	0.324	0.059
2011	HENRICO COUNTY	HDDV6	0.011	0.180	0.033
2011	HENRICO COUNTY	HDDV5	0.002	0.030	0.006
2011	HENRICO COUNTY	HDDV4	0.003	0.060	0.013
2011	HENRICO COUNTY	HDDV3	0.003	0.046	0.010
2011	HENRICO COUNTY	HDDV2b	0.008	0.144	0.031
2011	HENRICO COUNTY	HDBBT	0.002	0.064	0.013
2011	HENRICO COUNTY	HDBBS	0.006	0.108	0.019
	<i>TOTAL for HENRICO COUNTY</i>		7.752	10.395	92.714
2011	HOPEWELL CITY	MC	0.005	0.002	0.036
2011	HOPEWELL CITY	LDGV	0.321	0.235	3.157
2011	HOPEWELL CITY	LDGT4	0.029	0.029	0.278

TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2011	HOPEWELL CITY	LDGT3	0.060	0.048	0.596
2011	HOPEWELL CITY	LDGT2	0.190	0.159	1.941
2011	HOPEWELL CITY	LDGT1	0.055	0.037	0.537
2011	HOPEWELL CITY	LDDV	0.000	0.000	0.000
2011	HOPEWELL CITY	LDDT34	0.001	0.001	0.001
2011	HOPEWELL CITY	LDDT12	0.000	0.000	0.000
2011	HOPEWELL CITY	HDGV8b	0.000	0.000	0.000
2011	HOPEWELL CITY	HDGV8a	0.000	0.000	0.000
2011	HOPEWELL CITY	HDGV7	0.000	0.001	0.004
2011	HOPEWELL CITY	HDGV6	0.001	0.002	0.008
2011	HOPEWELL CITY	HDGV5	0.000	0.001	0.004
2011	HOPEWELL CITY	HDGV4	0.000	0.000	0.001
2011	HOPEWELL CITY	HDGV3	0.000	0.001	0.003
2011	HOPEWELL CITY	HDGV2b	0.010	0.027	0.088
2011	HOPEWELL CITY	HDGB	0.000	0.000	0.001
2011	HOPEWELL CITY	HDDV8b	0.007	0.124	0.031
2011	HOPEWELL CITY	HDDV8a	0.002	0.028	0.007
2011	HOPEWELL CITY	HDDV7	0.001	0.019	0.004
2011	HOPEWELL CITY	HDDV6	0.001	0.010	0.002
2011	HOPEWELL CITY	HDDV5	0.000	0.002	0.000
2011	HOPEWELL CITY	HDDV4	0.000	0.003	0.001
2011	HOPEWELL CITY	HDDV3	0.000	0.003	0.001
2011	HOPEWELL CITY	HDDV2b	0.001	0.008	0.002
2011	HOPEWELL CITY	HDDBT	0.000	0.003	0.001
2011	HOPEWELL CITY	HDDBS	0.000	0.006	0.001
TOTAL for HOPEWELL CITY			0.685	0.750	6.705
2011	PETERSBURG CITY	MC	0.013	0.003	0.096
2011	PETERSBURG CITY	LDGV	0.925	0.521	7.150
2011	PETERSBURG CITY	LDGT4	0.080	0.060	0.647
2011	PETERSBURG CITY	LDGT3	0.169	0.104	1.389
2011	PETERSBURG CITY	LDGT2	0.518	0.333	4.383
2011	PETERSBURG CITY	LDGT1	0.151	0.078	1.227
2011	PETERSBURG CITY	LDDV	0.000	0.000	0.001
2011	PETERSBURG CITY	LDDT34	0.001	0.002	0.002
2011	PETERSBURG CITY	LDDT12	0.000	0.000	0.000
2011	PETERSBURG CITY	HDGV8b	0.000	0.000	0.000
2011	PETERSBURG CITY	HDGV8a	0.000	0.000	0.000
2011	PETERSBURG CITY	HDGV7	0.001	0.002	0.010

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2011	PETERSBURG CITY	HDGV6	0.002	0.004	0.021
2011	PETERSBURG CITY	HDGV5	0.001	0.002	0.009
2011	PETERSBURG CITY	HDGV4	0.001	0.001	0.003
2011	PETERSBURG CITY	HDGV3	0.001	0.002	0.009
2011	PETERSBURG CITY	HDGV2b	0.027	0.052	0.227
2011	PETERSBURG CITY	HDGB	0.000	0.001	0.003
2011	PETERSBURG CITY	HDDV8b	0.015	0.246	0.074
2011	PETERSBURG CITY	HDDV8a	0.003	0.056	0.016
2011	PETERSBURG CITY	HDDV7	0.003	0.037	0.010
2011	PETERSBURG CITY	HDDV6	0.002	0.020	0.005
2011	PETERSBURG CITY	HDDV5	0.000	0.003	0.001
2011	PETERSBURG CITY	HDDV4	0.000	0.007	0.002
2011	PETERSBURG CITY	HDDV3	0.000	0.005	0.002
2011	PETERSBURG CITY	HDDV2b	0.001	0.016	0.005
2011	PETERSBURG CITY	HDDBT	0.000	0.007	0.002
2011	PETERSBURG CITY	HDDBS	0.001	0.012	0.003
TOTAL for PETERSBURG CITY			1.917	1.574	15.296
2011	PRINCE GEORGE COUNTY	MC	0.015	0.007	0.102
2011	PRINCE GEORGE COUNTY	LDGV	0.752	0.544	9.121
2011	PRINCE GEORGE COUNTY	LDGT4	0.065	0.069	0.783
2011	PRINCE GEORGE COUNTY	LDGT3	0.136	0.116	1.674
2011	PRINCE GEORGE COUNTY	LDGT2	0.447	0.382	5.551
2011	PRINCE GEORGE COUNTY	LDGT1	0.129	0.088	1.533
2011	PRINCE GEORGE COUNTY	LDDV	0.000	0.000	0.001
2011	PRINCE GEORGE COUNTY	LDDT34	0.001	0.002	0.002
2011	PRINCE GEORGE COUNTY	LDDT12	0.000	0.000	0.000
2011	PRINCE GEORGE COUNTY	HDGV8b	0.000	0.000	0.000
2011	PRINCE GEORGE COUNTY	HDGV8a	0.000	0.000	0.000
2011	PRINCE GEORGE COUNTY	HDGV7	0.002	0.005	0.018
2011	PRINCE GEORGE COUNTY	HDGV6	0.004	0.011	0.038
2011	PRINCE GEORGE COUNTY	HDGV5	0.002	0.005	0.017
2011	PRINCE GEORGE COUNTY	HDGV4	0.001	0.002	0.005
2011	PRINCE GEORGE COUNTY	HDGV3	0.001	0.005	0.016
2011	PRINCE GEORGE COUNTY	HDGV2b	0.039	0.134	0.416
2011	PRINCE GEORGE COUNTY	HDGB	0.001	0.002	0.005
2011	PRINCE GEORGE COUNTY	HDDV8b	0.021	0.729	0.112
2011	PRINCE GEORGE COUNTY	HDDV8a	0.005	0.166	0.024
2011	PRINCE GEORGE COUNTY	HDDV7	0.004	0.113	0.015

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2011	PRINCE GEORGE COUNTY	HDDV6	0.002	0.062	0.008
2011	PRINCE GEORGE COUNTY	HDDV5	0.000	0.010	0.002
2011	PRINCE GEORGE COUNTY	HDDV4	0.001	0.021	0.003
2011	PRINCE GEORGE COUNTY	HDDV3	0.001	0.016	0.002
2011	PRINCE GEORGE COUNTY	HDDV2b	0.002	0.049	0.007
2011	PRINCE GEORGE COUNTY	HDDBT	0.000	0.025	0.004
2011	PRINCE GEORGE COUNTY	HDDBS	0.001	0.037	0.005
TOTAL for PRINCE GEORGE COUNTY			1.630	2.600	19.463
2011	RICHMOND CITY	MC	0.077	0.023	0.503
2011	RICHMOND CITY	LDGV	3.121	2.275	30.173
2011	RICHMOND CITY	LDGT4	0.261	0.277	2.609
2011	RICHMOND CITY	LDGT3	0.539	0.460	5.565
2011	RICHMOND CITY	LDGT2	1.725	1.547	18.615
2011	RICHMOND CITY	LDGT1	0.495	0.351	5.113
2011	RICHMOND CITY	LDDV	0.001	0.001	0.004
2011	RICHMOND CITY	LDDT34	0.005	0.007	0.009
2011	RICHMOND CITY	LDDT12	0.000	0.000	0.000
2011	RICHMOND CITY	HDGV8b	0.000	0.000	0.000
2011	RICHMOND CITY	HDGV8a	0.000	0.000	0.000
2011	RICHMOND CITY	HDGV7	0.002	0.008	0.035
2011	RICHMOND CITY	HDGV6	0.005	0.018	0.076
2011	RICHMOND CITY	HDGV5	0.002	0.008	0.035
2011	RICHMOND CITY	HDGV4	0.001	0.002	0.009
2011	RICHMOND CITY	HDGV3	0.002	0.008	0.033
2011	RICHMOND CITY	HDGV2b	0.062	0.219	0.847
2011	RICHMOND CITY	HDGB	0.001	0.002	0.006
2011	RICHMOND CITY	HDDV8b	0.069	1.025	0.275
2011	RICHMOND CITY	HDDV8a	0.016	0.238	0.061
2011	RICHMOND CITY	HDDV7	0.013	0.167	0.039
2011	RICHMOND CITY	HDDV6	0.007	0.093	0.022
2011	RICHMOND CITY	HDDV5	0.001	0.016	0.004
2011	RICHMOND CITY	HDDV4	0.002	0.031	0.009
2011	RICHMOND CITY	HDDV3	0.002	0.023	0.007
2011	RICHMOND CITY	HDDV2b	0.005	0.072	0.020
2011	RICHMOND CITY	HDDBT	0.001	0.034	0.008
2011	RICHMOND CITY	HDDBS	0.004	0.055	0.012
TOTAL for RICHMOND CITY			6.420	6.961	64.088

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
	2011 GRAND TOTAL		31.343	40.661	355.36 4

TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2018	CHARLES CITY COUNTY	MC	0.003	0.002	0.017
2018	CHARLES CITY COUNTY	LDGV	0.120	0.089	1.487
2018	CHARLES CITY COUNTY	LDGT4	0.011	0.012	0.135
2018	CHARLES CITY COUNTY	LDGT3	0.023	0.021	0.287

TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2018	CHARLES CITY COUNTY	LDGT2	0.069	0.060	0.890
2018	CHARLES CITY COUNTY	LDGT1	0.019	0.014	0.236
2018	CHARLES CITY COUNTY	LDDV	0.000	0.000	0.000
2018	CHARLES CITY COUNTY	LDDT34	0.000	0.000	0.000
2018	CHARLES CITY COUNTY	LDDT12	0.000	0.000	0.000
2018	CHARLES CITY COUNTY	HDGV8b	0.000	0.000	0.000
2018	CHARLES CITY COUNTY	HDGV8a	0.000	0.000	0.000
2018	CHARLES CITY COUNTY	HDGV7	0.000	0.000	0.001
2018	CHARLES CITY COUNTY	HDGV6	0.000	0.000	0.003
2018	CHARLES CITY COUNTY	HDGV5	0.000	0.000	0.001
2018	CHARLES CITY COUNTY	HDGV4	0.000	0.000	0.000
2018	CHARLES CITY COUNTY	HDGV3	0.000	0.000	0.001
2018	CHARLES CITY COUNTY	HDDV2b	0.002	0.006	0.033
2018	CHARLES CITY COUNTY	HDGB	0.000	0.000	0.000
2018	CHARLES CITY COUNTY	HDDV8b	0.002	0.021	0.004
2018	CHARLES CITY COUNTY	HDDV8a	0.001	0.004	0.001
2018	CHARLES CITY COUNTY	HDDV7	0.000	0.003	0.001
2018	CHARLES CITY COUNTY	HDDV6	0.000	0.002	0.000
2018	CHARLES CITY COUNTY	HDDV5	0.000	0.000	0.000
2018	CHARLES CITY COUNTY	HDDV4	0.000	0.001	0.000
2018	CHARLES CITY COUNTY	HDDV3	0.000	0.000	0.000
2018	CHARLES CITY COUNTY	HDDV2b	0.000	0.002	0.000
2018	CHARLES CITY COUNTY	HDDBT	0.000	0.001	0.000
2018	CHARLES CITY COUNTY	HDDBS	0.000	0.002	0.000
TOTAL for CHARLES CITY COUNTY			0.252	0.241	3.100
2018	CHESTERFIELD COUNTY	MC	0.092	0.036	0.558
2018	CHESTERFIELD COUNTY	LDGV	2.775	2.133	40.539
2018	CHESTERFIELD COUNTY	LDGT4	0.238	0.282	3.403
2018	CHESTERFIELD COUNTY	LDGT3	0.487	0.462	7.201
2018	CHESTERFIELD COUNTY	LDGT2	1.567	1.459	24.292
2018	CHESTERFIELD COUNTY	LDGT1	0.429	0.346	6.514
2018	CHESTERFIELD COUNTY	LDDV	0.000	0.000	0.004
2018	CHESTERFIELD COUNTY	LDDT34	0.004	0.005	0.009
2018	CHESTERFIELD COUNTY	LDDT12	0.000	0.000	0.000
2018	CHESTERFIELD COUNTY	HDGV8b	0.000	0.000	0.000
2018	CHESTERFIELD COUNTY	HDGV8a	0.000	0.000	0.000
2018	CHESTERFIELD COUNTY	HDGV7	0.002	0.005	0.050
2018	CHESTERFIELD COUNTY	HDGV6	0.005	0.011	0.109

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2018	CHESTERFIELD COUNTY	HDGV5	0.002	0.005	0.050
2018	CHESTERFIELD COUNTY	HDGV4	0.001	0.001	0.013
2018	CHESTERFIELD COUNTY	HDGV3	0.002	0.005	0.049
2018	CHESTERFIELD COUNTY	HDGV2b	0.061	0.145	1.116
2018	CHESTERFIELD COUNTY	HDGB	0.001	0.002	0.006
2018	CHESTERFIELD COUNTY	HDDV8b	0.077	0.549	0.128
2018	CHESTERFIELD COUNTY	HDDV8a	0.019	0.120	0.028
2018	CHESTERFIELD COUNTY	HDDV7	0.014	0.090	0.019
2018	CHESTERFIELD COUNTY	HDDV6	0.008	0.050	0.011
2018	CHESTERFIELD COUNTY	HDDV5	0.001	0.010	0.002
2018	CHESTERFIELD COUNTY	HDDV4	0.003	0.019	0.005
2018	CHESTERFIELD COUNTY	HDDV3	0.002	0.012	0.003
2018	CHESTERFIELD COUNTY	HDDV2b	0.006	0.041	0.010
2018	CHESTERFIELD COUNTY	HDDBT	0.001	0.025	0.005
2018	CHESTERFIELD COUNTY	HDDBS	0.004	0.046	0.008
TOTAL for CHESTERFIELD COUNTY			5.801	5.859	84.132
2018	COLONIAL HEIGHTS CITY	MC	0.008	0.003	0.052
2018	COLONIAL HEIGHTS CITY	LDGV	0.227	0.168	2.994
2018	COLONIAL HEIGHTS CITY	LDGT4	0.020	0.022	0.255
2018	COLONIAL HEIGHTS CITY	LDGT3	0.040	0.037	0.542
2018	COLONIAL HEIGHTS CITY	LDGT2	0.127	0.113	1.793
2018	COLONIAL HEIGHTS CITY	LDGT1	0.035	0.027	0.482
2018	COLONIAL HEIGHTS CITY	LDDV	0.000	0.000	0.000
2018	COLONIAL HEIGHTS CITY	LDDT34	0.000	0.000	0.001
2018	COLONIAL HEIGHTS CITY	LDDT12	0.000	0.000	0.000
2018	COLONIAL HEIGHTS CITY	HDGV8b	0.000	0.000	0.000
2018	COLONIAL HEIGHTS CITY	HDGV8a	0.000	0.000	0.000
2018	COLONIAL HEIGHTS CITY	HDGV7	0.000	0.000	0.005
2018	COLONIAL HEIGHTS CITY	HDGV6	0.001	0.001	0.010
2018	COLONIAL HEIGHTS CITY	HDGV5	0.000	0.000	0.005
2018	COLONIAL HEIGHTS CITY	HDGV4	0.000	0.000	0.001
2018	COLONIAL HEIGHTS CITY	HDGV3	0.000	0.001	0.005
2018	COLONIAL HEIGHTS CITY	HDGV2b	0.007	0.014	0.107
2018	COLONIAL HEIGHTS CITY	HDGB	0.000	0.000	0.001
2018	COLONIAL HEIGHTS CITY	HDDV8b	0.007	0.053	0.013
2018	COLONIAL HEIGHTS CITY	HDDV8a	0.002	0.012	0.003
2018	COLONIAL HEIGHTS CITY	HDDV7	0.001	0.009	0.002
2018	COLONIAL HEIGHTS CITY	HDDV6	0.001	0.005	0.001

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2018	COLONIAL HEIGHTS CITY	HDDV5	0.000	0.001	0.000
2018	COLONIAL HEIGHTS CITY	HDDV4	0.000	0.002	0.000
2018	COLONIAL HEIGHTS CITY	HDDV3	0.000	0.001	0.000
2018	COLONIAL HEIGHTS CITY	HDDV2b	0.001	0.004	0.001
2018	COLONIAL HEIGHTS CITY	HDBBT	0.000	0.002	0.000
2018	COLONIAL HEIGHTS CITY	HDBBS	0.000	0.004	0.001
TOTAL for COLONIAL HEIGHTS CITY			0.477	0.478	6.274
2018	HANOVER COUNTY	MC	0.058	0.027	0.404
2018	HANOVER COUNTY	LDGV	1.516	1.181	23.838
2018	HANOVER COUNTY	LDGT4	0.125	0.160	2.009
2018	HANOVER COUNTY	LDGT3	0.257	0.263	4.259
2018	HANOVER COUNTY	LDGT2	0.819	0.819	14.163
2018	HANOVER COUNTY	LDGT1	0.224	0.194	3.807
2018	HANOVER COUNTY	LDDV	0.000	0.000	0.002
2018	HANOVER COUNTY	LDDT34	0.002	0.004	0.005
2018	HANOVER COUNTY	LDDT12	0.000	0.000	0.000
2018	HANOVER COUNTY	HDGV8b	0.000	0.000	0.000
2018	HANOVER COUNTY	HDGV8a	0.000	0.000	0.000
2018	HANOVER COUNTY	HDGV7	0.002	0.006	0.055
2018	HANOVER COUNTY	HDGV6	0.004	0.012	0.121
2018	HANOVER COUNTY	HDGV5	0.002	0.005	0.055
2018	HANOVER COUNTY	HDGV4	0.001	0.001	0.014
2018	HANOVER COUNTY	HDGV3	0.002	0.006	0.054
2018	HANOVER COUNTY	HDGV2b	0.051	0.163	1.232
2018	HANOVER COUNTY	HDGB	0.000	0.002	0.007
2018	HANOVER COUNTY	HDDV8b	0.062	0.773	0.124
2018	HANOVER COUNTY	HDDV8a	0.015	0.169	0.027
2018	HANOVER COUNTY	HDDV7	0.011	0.128	0.018
2018	HANOVER COUNTY	HDDV6	0.006	0.071	0.010
2018	HANOVER COUNTY	HDDV5	0.001	0.014	0.002
2018	HANOVER COUNTY	HDDV4	0.002	0.027	0.005
2018	HANOVER COUNTY	HDDV3	0.002	0.016	0.003
2018	HANOVER COUNTY	HDDV2b	0.005	0.057	0.010
2018	HANOVER COUNTY	HDBBT	0.001	0.033	0.004
2018	HANOVER COUNTY	HDBBS	0.003	0.065	0.008
TOTAL for HANOVER COUNTY			3.172	4.196	50.236
2018	HENRICO COUNTY	MC	0.119	0.044	0.772

TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2018	HENRICO COUNTY	LDGV	2.703	2.107	40.626
2018	HENRICO COUNTY	LDGT4	0.232	0.274	3.375
2018	HENRICO COUNTY	LDGT3	0.475	0.449	7.144
2018	HENRICO COUNTY	LDGT2	1.529	1.418	24.082
2018	HENRICO COUNTY	LDGT1	0.418	0.336	6.475
2018	HENRICO COUNTY	LDDV	0.000	0.000	0.004
2018	HENRICO COUNTY	LDDT34	0.004	0.005	0.010
2018	HENRICO COUNTY	LDDT12	0.000	0.000	0.000
2018	HENRICO COUNTY	HDGV8b	0.000	0.000	0.000
2018	HENRICO COUNTY	HDGV8a	0.000	0.000	0.000
2018	HENRICO COUNTY	HDGV7	0.002	0.005	0.066
2018	HENRICO COUNTY	HDGV6	0.005	0.012	0.146
2018	HENRICO COUNTY	HDGV5	0.002	0.005	0.067
2018	HENRICO COUNTY	HDGV4	0.001	0.001	0.017
2018	HENRICO COUNTY	HDGV3	0.002	0.006	0.064
2018	HENRICO COUNTY	HDGV2b	0.065	0.157	1.477
2018	HENRICO COUNTY	HDGB	0.001	0.002	0.008
2018	HENRICO COUNTY	HDDV8b	0.093	0.661	0.150
2018	HENRICO COUNTY	HDDV8a	0.023	0.146	0.034
2018	HENRICO COUNTY	HDDV7	0.017	0.110	0.022
2018	HENRICO COUNTY	HDDV6	0.010	0.061	0.012
2018	HENRICO COUNTY	HDDV5	0.002	0.012	0.003
2018	HENRICO COUNTY	HDDV4	0.003	0.023	0.005
2018	HENRICO COUNTY	HDDV3	0.003	0.014	0.004
2018	HENRICO COUNTY	HDDV2b	0.007	0.050	0.012
2018	HENRICO COUNTY	HDDBT	0.002	0.025	0.005
2018	HENRICO COUNTY	HDDBS	0.005	0.056	0.009
TOTAL for HENRICO COUNTY			5.722	5.982	84.592
2018	HOPEWELL CITY	MC	0.006	0.002	0.042
2018	HOPEWELL CITY	LDGV	0.219	0.166	2.835
2018	HOPEWELL CITY	LDGT4	0.022	0.023	0.257
2018	HOPEWELL CITY	LDGT3	0.045	0.039	0.547
2018	HOPEWELL CITY	LDGT2	0.137	0.118	1.772
2018	HOPEWELL CITY	LDGT1	0.038	0.028	0.476
2018	HOPEWELL CITY	LDDV	0.000	0.000	0.000
2018	HOPEWELL CITY	LDDT34	0.000	0.000	0.001
2018	HOPEWELL CITY	LDDT12	0.000	0.000	0.000
2018	HOPEWELL CITY	HDGV8b	0.000	0.000	0.000

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2018	HOPEWELL CITY	HDGV8a	0.000	0.000	0.000
2018	HOPEWELL CITY	HDGV7	0.000	0.000	0.004
2018	HOPEWELL CITY	HDGV6	0.001	0.001	0.009
2018	HOPEWELL CITY	HDGV5	0.000	0.000	0.004
2018	HOPEWELL CITY	HDGV4	0.000	0.000	0.001
2018	HOPEWELL CITY	HDGV3	0.000	0.001	0.004
2018	HOPEWELL CITY	HDGV2b	0.007	0.014	0.094
2018	HOPEWELL CITY	HDGB	0.000	0.000	0.001
2018	HOPEWELL CITY	HDDV8b	0.006	0.054	0.013
2018	HOPEWELL CITY	HDDV8a	0.002	0.012	0.003
2018	HOPEWELL CITY	HDDV7	0.001	0.009	0.002
2018	HOPEWELL CITY	HDDV6	0.001	0.005	0.001
2018	HOPEWELL CITY	HDDV5	0.000	0.001	0.000
2018	HOPEWELL CITY	HDDV4	0.000	0.002	0.000
2018	HOPEWELL CITY	HDDV3	0.000	0.001	0.000
2018	HOPEWELL CITY	HDDV2b	0.000	0.004	0.001
2018	HOPEWELL CITY	HDDBT	0.000	0.002	0.000
2018	HOPEWELL CITY	HDDBS	0.000	0.004	0.001
TOTAL for HOPEWELL CITY			0.486	0.487	6.069
2018	PETERSBURG CITY	MC	0.015	0.004	0.110
2018	PETERSBURG CITY	LDGV	0.585	0.360	6.225
2018	PETERSBURG CITY	LDGT4	0.060	0.049	0.566
2018	PETERSBURG CITY	LDGT3	0.124	0.083	1.209
2018	PETERSBURG CITY	LDGT2	0.362	0.244	3.805
2018	PETERSBURG CITY	LDGT1	0.102	0.059	1.032
2018	PETERSBURG CITY	LDDV	0.000	0.000	0.001
2018	PETERSBURG CITY	LDDT34	0.001	0.001	0.002
2018	PETERSBURG CITY	LDDT12	0.000	0.000	0.000
2018	PETERSBURG CITY	HDGV8b	0.000	0.000	0.000
2018	PETERSBURG CITY	HDGV8a	0.000	0.000	0.000
2018	PETERSBURG CITY	HDGV7	0.001	0.001	0.010
2018	PETERSBURG CITY	HDGV6	0.001	0.002	0.021
2018	PETERSBURG CITY	HDGV5	0.001	0.001	0.009
2018	PETERSBURG CITY	HDGV4	0.000	0.000	0.002
2018	PETERSBURG CITY	HDGV3	0.001	0.001	0.010
2018	PETERSBURG CITY	HDGV2b	0.018	0.026	0.223
2018	PETERSBURG CITY	HDGB	0.000	0.000	0.001
2018	PETERSBURG CITY	HDDV8b	0.012	0.105	0.028

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
2018	PETERSBURG CITY	HDDV8a	0.003	0.023	0.006
2018	PETERSBURG CITY	HDDV7	0.002	0.016	0.004
2018	PETERSBURG CITY	HDDV6	0.001	0.009	0.002
2018	PETERSBURG CITY	HDDV5	0.000	0.002	0.001
2018	PETERSBURG CITY	HDDV4	0.000	0.004	0.001
2018	PETERSBURG CITY	HDDV3	0.000	0.002	0.001
2018	PETERSBURG CITY	HDDV2b	0.001	0.007	0.002
2018	PETERSBURG CITY	HDBDT	0.000	0.004	0.001
2018	PETERSBURG CITY	HDBDS	0.001	0.008	0.002
TOTAL for PETERSBURG CITY			1.292	1.011	13.274
2018	PRINCE GEORGE COUNTY	MC	0.017	0.008	0.120
2018	PRINCE GEORGE COUNTY	LDGV	0.529	0.381	8.048
2018	PRINCE GEORGE COUNTY	LDGT4	0.050	0.055	0.717
2018	PRINCE GEORGE COUNTY	LDGT3	0.103	0.092	1.526
2018	PRINCE GEORGE COUNTY	LDGT2	0.323	0.283	5.009
2018	PRINCE GEORGE COUNTY	LDGT1	0.090	0.067	1.345
2018	PRINCE GEORGE COUNTY	LDDV	0.000	0.000	0.001
2018	PRINCE GEORGE COUNTY	LDDT34	0.001	0.001	0.002
2018	PRINCE GEORGE COUNTY	LDDT12	0.000	0.000	0.000
2018	PRINCE GEORGE COUNTY	HDGV8b	0.000	0.000	0.000
2018	PRINCE GEORGE COUNTY	HDGV8a	0.000	0.000	0.000
2018	PRINCE GEORGE COUNTY	HDGV7	0.001	0.002	0.019
2018	PRINCE GEORGE COUNTY	HDGV6	0.002	0.005	0.041
2018	PRINCE GEORGE COUNTY	HDGV5	0.001	0.002	0.018
2018	PRINCE GEORGE COUNTY	HDGV4	0.000	0.001	0.005
2018	PRINCE GEORGE COUNTY	HDGV3	0.001	0.003	0.019
2018	PRINCE GEORGE COUNTY	HDGV2b	0.025	0.067	0.426
2018	PRINCE GEORGE COUNTY	HDGB	0.000	0.001	0.003
2018	PRINCE GEORGE COUNTY	HDDV8b	0.019	0.304	0.046
2018	PRINCE GEORGE COUNTY	HDDV8a	0.005	0.065	0.010
2018	PRINCE GEORGE COUNTY	HDDV7	0.003	0.049	0.007
2018	PRINCE GEORGE COUNTY	HDDV6	0.002	0.027	0.004
2018	PRINCE GEORGE COUNTY	HDDV5	0.000	0.005	0.001
2018	PRINCE GEORGE COUNTY	HDDV4	0.001	0.010	0.002
2018	PRINCE GEORGE COUNTY	HDDV3	0.000	0.006	0.001
2018	PRINCE GEORGE COUNTY	HDDV2b	0.001	0.021	0.003
2018	PRINCE GEORGE COUNTY	HDBDT	0.000	0.014	0.002
2018	PRINCE GEORGE COUNTY	HDBDS	0.001	0.025	0.003

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TABLE 4.2-7
BASE AND PROJECTION YEAR MOBILE SOURCE EMISSIONS BY JURISDICTION AND VEHICLE TYPE

YEAR	JURISDICTION	VEHICLE CLASS	VOC (TPD)	NOX (TPD)	CO (TPD)
	<i>TOTAL for PRINCE GEORGE COUNTY</i>		1.176	1.495	17.375
2018	RICHMOND CITY	MC	0.087	0.026	0.570
2018	RICHMOND CITY	LDGV	2.050	1.532	26.203
2018	RICHMOND CITY	LDGT4	0.193	0.203	2.297
2018	RICHMOND CITY	LDGT3	0.397	0.337	4.875
2018	RICHMOND CITY	LDGT2	1.244	1.055	16.363
2018	RICHMOND CITY	LDGT1	0.346	0.254	4.402
2018	RICHMOND CITY	LDDV	0.000	0.000	0.003
2018	RICHMOND CITY	LDDT34	0.003	0.004	0.008
2018	RICHMOND CITY	LDDT12	0.000	0.000	0.000
2018	RICHMOND CITY	HDGV8b	0.000	0.000	0.000
2018	RICHMOND CITY	HDGV8a	0.000	0.000	0.000
2018	RICHMOND CITY	HDGV7	0.001	0.002	0.039
2018	RICHMOND CITY	HDGV6	0.003	0.005	0.086
2018	RICHMOND CITY	HDGV5	0.001	0.002	0.039
2018	RICHMOND CITY	HDGV4	0.000	0.001	0.010
2018	RICHMOND CITY	HDGV3	0.001	0.003	0.039
2018	RICHMOND CITY	HDGV2b	0.038	0.071	0.883
2018	RICHMOND CITY	HDGB	0.000	0.001	0.005
2018	RICHMOND CITY	HDDV8b	0.057	0.331	0.094
2018	RICHMOND CITY	HDDV8a	0.014	0.074	0.021
2018	RICHMOND CITY	HDDV7	0.011	0.056	0.014
2018	RICHMOND CITY	HDDV6	0.006	0.031	0.008
2018	RICHMOND CITY	HDDV5	0.001	0.006	0.002
2018	RICHMOND CITY	HDDV4	0.002	0.012	0.003
2018	RICHMOND CITY	HDDV3	0.002	0.008	0.002
2018	RICHMOND CITY	HDDV2b	0.005	0.025	0.007
2018	RICHMOND CITY	HDDBT	0.001	0.013	0.003
2018	RICHMOND CITY	HDDBS	0.003	0.026	0.005
	<i>TOTAL for RICHMOND CITY</i>		4.466	4.079	55.983
	<i>GRAND TOTAL</i>		22.845	23.827	321.035

5. Nonroad Emissions

The nonroad emissions category includes a diverse collection of engines, equipment, vehicles, and vessels. These include outdoor power equipment, recreational vehicles, farm and construction machinery, lawn and garden equipment, marine vessels, locomotives, and many other applications. Until the mid-1990s, emissions from these engines were largely uncontrolled. However, in the past 10 years, EPA has adopted

more stringent emission standards for most of these engines, culminating with the Clean Air Nonroad Diesel Rule promulgated in May 2004 that reduces exhaust emissions by more than 90%, and reduces the sulfur level in nonroad diesel fuel to 15 parts per million by 2010, more than a 99% reduction from today's levels.

Nonroad emissions were calculated with EPA's Draft NONROAD2005 model (the NONROAD model) that incorporates the recent EPA regulations affecting these engines well into the future. The NONROAD model was used to calculate emissions for all nonroad engine types except for aircraft, locomotives, and commercial marine vessels, which were inventoried separately. Tables 5-1 and 5-2 below summarize the NONROAD inputs for each jurisdiction and analysis year.

Most of Richmond's nonroad inputs are based on reformulated gasoline (RFG), except for the Prince George and Petersburg nonroad inputs, which are based on southern-grade conventional gasoline. The temperature inputs for the entire Richmond-Petersburg nonattainment area were based on the average minimum and maximum temperatures on the 10 highest 8-hour ozone exceedance days between 2003 and 2005. All nonroad emissions were calculated for a typical summer weekday.

Table 5-1
NONROAD Model Inputs for Richmond Nonattainment Area
(except Petersburg and Prince George)

Year	2002	2005	2011	2018
RVP	6.7	6.8	6.8	6.8
Oxygen Wt%	2.1	2.1	2.1	2.1
Gasoline Sulfur%	0.0129	0.0090	0.0030	0.0030
Diesel Sulfur% (Land)	0.2283	0.2283	0.0031	0.0011
Diesel Sulfur% (Marine)	0.2638	0.2639	0.0234	0.0056
CNG/LPG Sulfur%	0.003	0.003	0.003	0.003
Minimum Temp (F)	70.97	70.97	70.97	70.97
Maximum Temp (F)	93.0	93.0	93.0	93.0
Average Temp(F)	81.99	81.99	81.99	81.99
Stage II Control%	77	77	77	77

Table 5-2
NONROAD Model Inputs for Petersburg and Prince George

Year	2002	2005	2011	2018
RVP	8.4	8.4	8.4	8.4
Oxygen Wt%	0	0	0	0
Gasoline Sulfur%	0.0279	0.0092	0.0030	0.0030
Diesel Sulfur% (Land)	0.2283	0.2283	0.0031	0.0011
Diesel Sulfur% (Marine)	0.2638	0.2639	0.0234	0.0056
CNG/LPG Sulfur%	0.003	0.003	0.003	0.003
Minimum Temp (F)	70.97	70.97	70.97	70.97
Maximum Temp (F)	93.0	93.0	93.0	93.0
Average Temp(F)	81.99	81.99	81.99	81.99
Stage II Control%	0	0	0	0

Tables 5-3, 5-4, and 5-5 below detail the daily emission rates calculated for each jurisdiction for nonroad equipment.

Table 5-3
Modeled Nonroad VOC Emissions

FIPS_NAME	2002	2005	2011	2018
Charles City County	1.46465	1.31946	1.03341	0.89653
Chesterfield County	5.43652	4.88816	3.89850	3.71492
Colonial Heights city	0.22513	0.19559	0.14922	0.15118
Hanover County	5.17566	4.36135	3.26920	3.33604
Henrico County	4.79056	4.15353	3.20099	3.18540
Hopewell city	0.43942	0.37059	0.27232	0.28027
Petersburg city	0.34966	0.31662	0.24984	0.24946
Prince George County	1.67675	1.63392	1.38644	1.15985
Richmond city	3.71925	3.19888	2.43793	2.54176
Total	23.27759	20.43810	15.89784	15.51542

Table 5-4
Modeled Nonroad CO Emissions

FIPS_NAME	2002	2005	2011	2018
Charles City County	4.14254	4.11919	3.99615	4.01214
Chesterfield County	61.09332	65.04881	70.37996	76.61753
Colonial Heights city	2.75546	2.92357	3.08901	3.32521
Hanover County	70.38834	75.25816	82.49540	91.78718
Henrico County	58.92673	62.37651	67.15717	72.66791
Hopewell city	5.84374	6.20455	6.56339	7.09983
Petersburg city	4.62936	4.90818	5.11392	5.41015
Prince George County	7.73981	8.11928	8.53685	8.88423
Richmond city	53.08689	56.82188	61.38344	67.36993

Total	268.60619	285.78013	308.71531	337.17410
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Table 5-5
Modeled Nonroad NOx Emissions

FIPS_NAME	2002	2005	2011	2018
Charles City County	0.36517	0.35987	0.32502	0.26025
Chesterfield County	4.61155	4.37434	3.41870	2.20113
Colonial Heights city	0.11885	0.11025	0.07065	0.04746
Hanover County	2.62510	2.49462	2.04032	1.50993
Henrico County	6.88267	6.53779	5.16170	3.16404
Hopewell city	0.22460	0.20783	0.13351	0.09111
Petersburg city	0.25606	0.23652	0.14246	0.08388
Prince George County	0.71497	0.68328	0.55617	0.37397
Richmond city	1.99261	1.85782	1.26985	0.90938
Total	17.79157	16.86232	13.11837	8.64115

6. Refueling Emissions

Refueling emissions are evaporative VOC emissions that are generated during the process of refilling a vehicle's gasoline tank. These include both gasoline spillage and the displacement of gasoline vapors from the head space of a gasoline tank into the atmosphere. Refueling emissions can be calculated with the Mobile6.2 mobile emissions model, and are typically included in the VOC gram per mile emission factor generated. In order to isolate refueling VOC emissions from other sources of evaporative and exhaust VOC emissions, two Mobile6.2 emissions runs were needed for each analysis year; one with refueling emissions included and one without refueling emissions included. Subtracting the latter from the former for each analysis year will provide the isolated refueling emissions, as shown in Table 6-1 below.

Table 6-1
VOC Refueling Emissions in tons/day

Locality	2002	2005	2011	2018
Charles City	0.030	0.039	0.022	0.013
Chesterfield	0.382	0.378	0.235	0.201
Colonial Heights	0.031	0.027	0.017	0.014
Hanover	0.208	0.197	0.128	0.113
Henrico	0.415	0.381	0.235	0.200
Hopewell	0.020	0.022	0.015	0.012
Petersburg	0.220	0.172	0.095	0.053
Prince George	0.291	0.240	0.123	0.076
Richmond	0.292	0.247	0.158	0.122
Total:	1.890	1.702	1.028	0.804

Many factors can affect the magnitude of refueling emissions such as temperature, gasoline RVP, and the presence of Stage II vapor recovery controls. In the Richmond nonattainment area, the temperature profile was derived by compiling hourly meteorological data from the 10 highest 8-hour ozone exceedance days. In Prince George and Petersburg, a gasoline RVP of 8.4 pounds per square inch was used, since these counties were not subject to RFG requirements. This number was derived by averaging together the RVP of numerous gasoline samples provided by the Virginia Department of Agriculture. The emissions from other localities in Richmond, which have been subject to RFG requirements, were calculated based on the use of

Phase 2 RFG in all analysis years. Phase 2 RFG has a typical RVP value of 6.7 pounds per square inch. In addition, Stage II vapor recovery is required in all Richmond area jurisdictions, except for Prince George and Petersburg. Therefore, the controls achieved from the Stage II program were included in these calculations.

7. Area Source Emissions

The 2002 periodic year stationary area source emissions inventories were used as the basis for the development of the other area inventories included in this document. The methodologies used to develop the 2002 SIP inventory followed approved EPA procedures and guidance.

7.1. Growth Factors

The 2002 base year inventory was used to forecast the 2005 current attainment year, 2011 interim maintenance year, and 2018 final maintenance year emission inventories using growth factors generated by the Economic Growth Analysis System (EGAS). The emission factor model produces category specific growth factors, which were used to project 2002 emissions forward to 2005, 2011 and 2018. Below is a summary of the growth factors developed by EGAS 5.0, which were used. Growth factors with a value less than 1.0 reflect negative growth for that source category. The factors provided reflect the overall net growth for the periods, not annual growth rates. Table 7.1-1 below identifies the growth factor used for each general category of emissions.

**Table 7.1-1
Growth Factors**

SCC	General Category Description	Growth Factor 2002-2005	Growth Factor 2002-2011	Growth Factor 2002 - 2018
2102002000	Industrial Fuel Consumption, Coal	0.956	0.963	0.985
2102004000	Industrial Fuel Consumption, Distillate	0.997	1.036	1.146
2102005000	Industrial Fuel Consumption, Residual	1.016	1.017	1.106
2102006000	Industrial Fuel Consumption, Nat Gas	1.078	1.175	1.268
2102007000	Industrial Fuel Consumption, LP Gas	0.990	1.070	1.179
2102008000	Industrial Fuel Consumption, Wood	1.059	1.178	1.339
2103002000	Commercial Fuel Consumption, Coal	1.065	1.050	1.046
2103004000	Commercial Fuel Consumption, Distillate	1.171	1.324	1.463
2103005000	Commercial Fuel Consumption, Residual	1.530	1.595	1.657
2103006000	Commercial Fuel Consumption, Nat Gas	1.039	1.242	1.415
2103007000	Commercial Fuel Consumption, LP Gas	1.064	1.067	1.106
2103008000	Commercial Fuel Consumption, Wood	1.000	1.000	1.000
2104002000	Residential Fuel Consumption, Coal	1.020	0.979	0.937
2104004000	Residential Fuel Consumption, Distillate	0.996	0.937	0.824
2104006000	Residential Fuel Consumption, Nat Gas	1.081	1.234	1.356
2104007000	Residential Fuel Consumption, LP Gas	0.987	1.081	1.174
2104008000	Residential Fuel Consumption, Wood	0.998	1.002	1.010
2275001000	Aviation Emissions, Military	1.127	1.221	1.392
2275020000	Aviation Emissions, Commercial	1.103	1.361	1.615
2275050000	Aviation Emissions, General Aviation	1.103	1.361	1.615
2275060000	Aviation Emissions, Air Taxi	1.103	1.361	1.615
2275900000	Aircraft Refueling	1.103	1.361	1.615

Table 7.1-1
Growth Factors

SCC	General Category Description	Growth Factor 2002-2005	Growth Factor 2002-2011	Growth Factor 2002 - 2018
2280002000	Commercial Marine Vessels	1.029	1.107	1.197
2280003000	Commercial Marine Vessels	1.037	1.131	1.378
2283002000	Military Marine Vessels	1.127	1.221	1.392
2302050000	Bakery	1.022	1.084	1.167
2302070001	Breweries	1.011	1.052	1.103
2302070005	Wineries	1.011	1.052	1.103
2302070010	Distilleries	1.011	1.052	1.103
2401002000	Surface Coating	1.109	1.337	1.516
2401003000	Surface Coating	1.109	1.337	1.516
2401005000	Surface Coating	1.072	1.253	1.439
2401008000	Lane Markings	1.005	1.035	1.027
2401015000	Surface Coating	1.066	1.235	1.442
2401020000	Surface Coating	1.083	1.089	1.479
2401025000	Surface Coating	1.083	1.089	1.479
2401040000	Surface Coating	1.084	1.337	1.537
2401045000	Surface Coating	1.100	1.337	1.644
2401055000	Surface Coating	1.359	2.377	2.907
2401060000	Surface Coating	1.054	1.074	1.465
2401065000	Surface Coating	1.016	1.158	1.145
2401070000	Surface Coating	1.098	1.413	1.725
2401080000	Surface Coating	1.068	1.100	1.351
2401090000	Surface Coating	1.245	1.723	2.110
2401100000	Surface Coating	1.106	1.364	1.668
2401200000	Surface Coating	1.084	1.308	1.528
2415300000	Surface Cleaning	1.113	1.320	1.621
2415330000	Surface Cleaning	1.202	1.709	2.299
2415345000	Surface Cleaning	1.223	1.642	2.009
2415360000	Surface Cleaning	1.156	1.519	1.747
2420000000	Dry cleaning	1.008	1.040	1.195
2425000000	Graphic Arts	1.035	1.101	1.300
2440020000	Industrial Adhesives	1.106	1.364	1.668
2461021000	Asphalt Paving	1.091	1.302	1.500
2461022000	Asphalt Paving	1.091	1.302	1.500
2461023000	Asphalt Roofing	1.091	1.302	1.500
2461800000	Pesticide	1.051	1.135	1.230
2461850000	Pesticide	1.098	1.305	1.487
2465800000	Pesticide	1.051	1.135	1.230
2465900000	Commercial/Consumer Solvent Use	1.051	1.135	1.230
2501050030	Petroleum Vessel Ballasting	1.063	1.178	1.315
2501050060	Petroleum Vessel Ballasting	1.087	1.076	1.025

Table 7.1-1
Growth Factors

SCC	General Category Description	Growth Factor 2002-2005	Growth Factor 2002-2011	Growth Factor 2002 - 2018
2501050090	Petroleum Vessel Ballasting	1.087	1.076	1.025
2501050120	Petroleum Vessel Ballasting	1.005	1.035	1.027
2501050150	Petroleum Vessel Ballasting	1.103	1.361	1.615
2501050180	Petroleum Vessel Ballasting	1.087	1.076	1.025
2501060051	Tank Truck Loading/Unloading	1.005	1.035	1.027
2501060052	Tank Truck Loading/Unloading	1.005	1.035	1.027
2501060053	Tank Truck Loading/Unloading	1.005	1.035	1.027
2501060103	Vehicle Refueling and Spillage	1.005	1.035	1.027
2501060201	UST Breathing	1.005	1.035	1.027
2501995030	Petroleum Vessel Loading/Unloading	1.063	1.178	1.315
2501995060	Petroleum Vessel Loading/Unloading	1.087	1.076	1.025
2501995090	Petroleum Vessel Loading/Unloading	1.087	1.076	1.025
2501995120	Petroleum Vessel Loading/Unloading	1.005	1.035	1.027
2501995150	Petroleum Vessel Loading/Unloading	1.103	1.361	1.615
2501995180	Petroleum Vessel Loading/Unloading	1.087	1.076	1.025
2505020030	Petroleum Vessel in Transit	1.063	1.178	1.315
2505020060	Petroleum Vessel in Transit	1.063	1.178	1.315
2505020090	Petroleum Vessel in Transit	1.063	1.178	1.315
2505020120	Petroleum Vessel in Transit	1.063	1.178	1.315
2505020150	Petroleum Vessel in Transit	1.063	1.178	1.315
2505020180	Petroleum Vessel in Transit	1.063	1.178	1.315
2505030120	Tank Truck in Transit	1.005	1.035	1.027
2601010000	On-Site Incineration	1.106	1.364	1.668
2601020000	On-Site Incineration	1.091	1.302	1.500
2601030000	On-Site Incineration	1.051	1.135	1.230
2610020000	Open Burning	1.091	1.302	1.500
2610030000	Open Burning	1.051	1.135	1.230
2620030000	Landfills	1.038	1.137	1.315
2630020000	POTWs	1.038	1.137	1.315
2640000000	TSDF	1.038	1.137	1.315
2660000000	Leaking U.S.T.	1.005	1.035	1.027
2810001000	Forest Wildfires	1.000	1.000	1.000
2810015000	Prescribed Burning	1.000	1.000	1.000
2810030000	Structural Fires	1.136	1.306	1.371
2501011011	PFC Residential, Permeation	1.005	1.035	1.027
2501011012	PFC Residential, Diurnal	1.005	1.035	1.027
2501011016	PFC Residential, Transport	1.005	1.035	1.027
2501012011	PFC Commercial, Permeation	1.005	1.035	1.027
2501012012	PFC Commercial, Diurnal	1.005	1.035	1.027
2501012016	PFC Commercial, Transport	1.005	1.035	1.027

7.2. Area, Refueling, and Nonroad Emissions

The following tables show area, refueling, and nonroad emissions of ozone precursor emissions for 2002, 2005, 2011 and 2018 for each of the jurisdictions in the Richmond nonattainment area.

Table 7.2-2
Stationary Area and Nonroad Mobile Source VOC Emissions

Jurisdiction Name	Category Description	2002	2005	2011	2018
Charles City County	Gasoline/Diesel Distribution	0.04459	0.05273	0.03674	0.02891
	Solvent Evaporation	0.33714	0.36506	0.42327	0.47908
	Bioprocess Sources	0.00351	0.00358	0.00380	0.00409
	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.03683	0.04018	0.04798	0.05541
	Fuel Combustion	0.00817	0.00804	0.00832	0.00873
	Other Area Sources	0.05116	0.05116	0.05116	0.05116
	State Developed Non-Road	0.05434	0.05407	0.05586	0.05868
	Off-highway Vehicle, Modeled	1.46465	1.31946	1.03341	0.89653
Charles City County		2.00038	1.89427	1.66053	1.58260
Chesterfield County	Gasoline/Diesel Distribution	1.59078	1.59046	1.51610	1.54081
	Solvent Evaporation	10.07546	10.97401	12.77790	14.74590
	Bioprocess Sources	0.13484	0.13774	0.14619	0.15731
	Waste Management	0.15223	0.15806	0.17315	0.20023
	Solid Waste Burning	0.53099	0.57899	0.69057	0.79826
	Fuel Combustion	0.29804	0.29431	0.30554	0.32125
	Other Area Sources	0.04168	0.04524	0.04970	0.05143
	State Developed Non-Road	0.06257	0.06080	0.06252	0.06575
	Off-highway Vehicle, Modeled	5.43652	4.88816	3.89850	3.71492
Chesterfield County		18.32311	18.72778	19.62018	21.59586
Colonial Heights city	Gasoline/Diesel Distribution	0.17638	0.17248	0.16728	0.16586
	Solvent Evaporation	0.65812	0.71345	0.83224	0.95114
	Bioprocess Sources	0.00848	0.00866	0.00919	0.00989
	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.01245	0.01356	0.01613	0.01871
	Fuel Combustion	0.01247	0.01243	0.01302	0.01375
	Other Area Sources	0.00073	0.00083	0.00096	0.00100
	State Developed Non-Road	0.01013	0.01042	0.01121	0.01213
	Off-highway Vehicle, Modeled	0.22513	0.19559	0.14922	0.15118
Colonial Heights city		1.10389	1.12743	1.19924	1.32367
Hanover County	Gasoline/Diesel Distribution	1.33535	1.32783	1.32038	1.37516
	Solvent Evaporation	4.34444	4.73033	5.54980	6.38529
	Bioprocess Sources	0.04563	0.04661	0.04947	0.05323
	Waste Management	0.00002	0.00002	0.00002	0.00003
	Solid Waste Burning	0.25325	0.27629	0.32993	0.38169
	Fuel Combustion	0.10783	0.10643	0.11045	0.11611

Table 7.2-2
Stationary Area and Nonroad Mobile Source VOC Emissions

Jurisdiction Name	Category Description	2002	2005	2011	2018
Hanover County	Other Area Sources	0.03994	0.04113	0.04263	0.04320
	State Developed Non-Road	0.03319	0.03245	0.03402	0.03629
	Off-highway Vehicle, Modeled	5.17566	4.36135	3.26920	3.33604
Hanover County		11.33531	10.92244	10.70589	11.72705
Henrico County	Gasoline/Diesel Distribution	1.65301	1.62652	1.54098	1.56564
	Solvent Evaporation	10.43832	11.33803	13.15524	15.14252
	Bioprocess Sources	0.13524	0.13814	0.14663	0.15777
	Waste Management	0.01844	0.01914	0.02097	0.02425
	Solid Waste Burning	0.27474	0.29986	0.35841	0.41798
	Fuel Combustion	0.32469	0.32148	0.33466	0.35245
	Other Area Sources	0.01859	0.01969	0.02108	0.02161
	State Developed Non-Road	0.16868	0.17812	0.20436	0.23308
	Off-highway Vehicle, Modeled	4.79056	4.15353	3.20099	3.18540
Henrico County		17.82227	18.09452	18.98331	21.10069
Hopewell city	Gasoline/Diesel Distribution	0.15052	0.15335	0.15074	0.15241
	Solvent Evaporation	0.78486	0.84894	0.98016	1.12546
	Bioprocess Sources	0.01103	0.01127	0.01196	0.01287
	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.02129	0.02330	0.02801	0.03303
	Fuel Combustion	0.05427	0.05332	0.05510	0.05782
	Other Area Sources	0.00137	0.00155	0.00178	0.00187
	State Developed Non-Road	0.03018	0.02767	0.02553	0.02443
	Off-highway Vehicle, Modeled	0.43942	0.37059	0.27232	0.28027
Hopewell city		1.49294	1.48999	1.52560	1.68816
Petersburg city	Gasoline/Diesel Distribution	1.04539	0.99818	0.44126	0.40073
	Solvent Evaporation	1.73731	1.90845	2.00112	2.32588
	Bioprocess Sources	0.01634	0.01669	0.01771	0.01906
	Waste Management	0.00003	0.00003	0.00003	0.00003
	Solid Waste Burning	0.03507	0.03832	0.03915	0.04599
	Fuel Combustion	0.04976	0.04908	0.05089	0.05350
	Other Area Sources	0.00235	0.00267	0.00307	0.00322
	State Developed Non-Road	0.05414	0.05111	0.04916	0.04877
	Off-highway Vehicle, Modeled	0.34966	0.31662	0.24984	0.24946
Petersburg city		3.29005	3.38113	2.85224	3.14664
Prince George County	Gasoline/Diesel Distribution	0.75715	0.70815	0.34809	0.30777
	Solvent Evaporation	1.19688	1.29525	1.38448	1.56033
	Bioprocess Sources	0.01705	0.01741	0.01848	0.01989
	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.57755	0.62994	0.17439	0.20117
	Fuel Combustion	0.02464	0.02443	0.02545	0.02680

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Table 7.2-2
Stationary Area and Nonroad Mobile Source VOC Emissions

Jurisdiction Name	Category Description	2002	2005	2011	2018
Prince George County	Other Area Sources	0.01545	0.01566	0.01592	0.01602
	State Developed Non-Road	0.07759	0.07402	0.07234	0.07268
	Off-highway Vehicle, Modeled	1.67675	1.63392	1.38644	1.15985
		4.34306	4.39878	3.42560	3.36451
Richmond city	Gasoline/Diesel Distribution	1.30601	1.26420	1.21966	1.23440
	Solvent Evaporation	9.15800	9.94380	11.51928	13.45230
	Bioprocess Sources	0.09775	0.09985	0.10598	0.11404
	Waste Management	0.01157	0.01202	0.01316	0.01522
	Solid Waste Burning	0.15947	0.17414	0.20840	0.24416
	Fuel Combustion	0.40855	0.40314	0.41835	0.44001
	Other Area Sources	0.01194	0.01354	0.01556	0.01634
	State Developed Non-Road	0.05826	0.05238	0.04684	0.04349
	Off-highway Vehicle, Modeled	3.71925	3.19888	2.43793	2.54176
		14.93080	15.16194	15.98516	18.10171

Table 7.2-3

Stationary Area and Nonroad Mobile Source CO Emissions

Jurisdiction Name	Category Description	2002	2005	2011	2018
Charles City County	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.24079	0.26267	0.31361	0.36152
	Fuel Combustion	0.13848	0.13889	0.14643	0.15738
	Other Area Sources	1.08701	1.08701	1.08701	1.08701
	State Developed Non-Road	0.11741	0.11636	0.11961	0.12515
	Off-highway Vehicle, Modeled	4.14254	4.11919	3.99615	4.01214
Charles City County		5.72624	5.72412	5.66282	5.74320
Chesterfield County	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	2.88500	3.14693	3.75675	4.33317
	Fuel Combustion	4.93789	4.95890	5.23299	5.62500
	Other Area Sources	0.47009	0.48949	0.51380	0.52322
	State Developed Non-Road	0.72431	0.77968	0.93226	1.08673
	Off-highway Vehicle, Modeled	61.09332	65.04881	70.37996	76.61753
Chesterfield County		70.11060	74.42381	80.81577	88.18565
Colonial Heights city	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.02958	0.03226	0.03848	0.04461
	Fuel Combustion	0.19407	0.19559	0.20683	0.22231
	Other Area Sources	0.00397	0.00451	0.00518	0.00544
	State Developed Non-Road	0.02128	0.02189	0.02355	0.02548
	Off-highway Vehicle, Modeled	2.75546	2.92357	3.08901	3.32521
Colonial Heights city		3.00436	3.17782	3.36305	3.62306
Hanover County	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	1.47781	1.61216	1.92512	2.22075
	Fuel Combustion	1.79201	1.79938	1.89874	2.04109
	Other Area Sources	0.69006	0.69656	0.70470	0.70786
	State Developed Non-Road	0.53324	0.57829	0.69868	0.81964
	Off-highway Vehicle, Modeled	70.38834	75.25816	82.49540	91.78718
Hanover County		74.88146	79.94454	87.72264	97.57651
Henrico County	Waste Management	0.14614	0.15174	0.16622	0.19222
	Solid Waste Burning	0.86004	0.93884	1.12280	1.30337
	Fuel Combustion	5.29061	5.31875	5.61729	6.03978
	Other Area Sources	0.26514	0.27114	0.27866	0.28157
	State Developed Non-Road	1.89543	2.07460	2.50669	2.94822
	Off-highway Vehicle, Modeled	58.92673	62.37651	67.15717	72.66791
Henrico County		67.38410	71.13158	76.84882	83.43307
Hopewell city	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.04158	0.04551	0.05479	0.06456
	Fuel Combustion	0.93011	0.93248	0.98329	1.05737

Table 7.2-3
Stationary Area and Nonroad Mobile Source CO Emissions

Jurisdiction Name	Category Description	2002	2005	2011	2018
Hopewell city	Other Area Sources	0.00737	0.00837	0.00963	0.01011
	State Developed Non-Road	0.06900	0.06284	0.05736	0.05423
	Off-highway Vehicle, Modeled	5.84374	6.20455	6.56339	7.09983
Hopewell city		6.89180	7.25376	7.66846	8.28611
Petersburg city	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.10203	0.11146	0.08358	0.09798
	Fuel Combustion	0.83214	0.83534	0.88147	0.94777
	Other Area Sources	0.01276	0.01449	0.01666	0.01750
	State Developed Non-Road	0.12202	0.11441	0.10906	0.10730
	Off-highway Vehicle, Modeled	4.62936	4.90818	5.11392	5.41015
Petersburg city		5.69831	5.98388	6.20469	6.58069
Prince George County	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	4.12940	4.50418	1.12164	1.29262
	Fuel Combustion	0.39696	0.39921	0.42149	0.45286
	Other Area Sources	0.29952	0.30066	0.30209	0.30264
	State Developed Non-Road	0.17401	0.16503	0.15995	0.15961
	Off-highway Vehicle, Modeled	7.73981	8.11928	8.53685	8.88423
Prince George County		12.73970	13.48836	10.54202	11.09195
Richmond city	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.31022	0.33902	0.40653	0.47627
	Fuel Combustion	6.81685	6.84483	7.22524	7.77095
	Other Area Sources	0.06456	0.07331	0.08429	0.08854
	State Developed Non-Road	0.13571	0.12138	0.10765	0.09893
	Off-highway Vehicle, Modeled	53.08689	56.82188	61.38344	67.36993
Richmond city		60.41423	64.20043	69.20716	75.80462

Table 7.2-4
Stationary Area and Nonroad Mobile Source NOx Emissions

Jurisdiction Name	Category Description	2002	2005	2011	2018
Charles City County	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.00891	0.00973	0.01164	0.01347
	Fuel Combustion	0.12015	0.11931	0.12360	0.12968
	Other Area Sources	0.02332	0.02332	0.02332	0.02332
	State Developed Non-Road	0.50957	0.47992	0.46057	0.45585
	Off-highway Vehicle, Modeled	0.36517	0.35987	0.32502	0.26025
Charles City County		1.02712	0.99214	0.94414	0.88256
Chesterfield County	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.15139	0.16529	0.19776	0.22932
	Fuel Combustion	4.50146	4.50147	4.69723	4.95026
	Other Area Sources	0.01111	0.01156	0.01213	0.01235
	State Developed Non-Road	0.82130	0.72290	0.62458	0.55982
	Off-highway Vehicle, Modeled	4.61155	4.37434	3.41870	2.20113
Chesterfield County		10.09681	9.77555	8.95039	7.95289
Colonial Heights city	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.00503	0.00549	0.00658	0.00766
	Fuel Combustion	0.19961	0.20263	0.21466	0.22815
	Other Area Sources	0.00009	0.00011	0.00012	0.00013
	State Developed Non-Road	0.05573	0.05733	0.06168	0.06673
	Off-highway Vehicle, Modeled	0.11885	0.11025	0.07065	0.04746
Colonial Heights city		0.37932	0.37581	0.35369	0.35012
Hanover County	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.06802	0.07429	0.08896	0.10327
	Fuel Combustion	1.62541	1.62442	1.69404	1.78482
	Other Area Sources	0.06232	0.06248	0.06267	0.06274
	State Developed Non-Road	0.42717	0.37050	0.31210	0.27157
	Off-highway Vehicle, Modeled	2.62510	2.49462	2.04032	1.50993
Hanover County		4.80803	4.62632	4.19809	3.73233
Henrico County	Waste Management	0.02449	0.02543	0.02785	0.03221
	Solid Waste Burning	0.10187	0.11141	0.13386	0.15663
	Fuel Combustion	5.01207	5.03880	5.28716	5.59155
	Other Area Sources	0.00577	0.00591	0.00609	0.00616
	State Developed Non-Road	1.31436	1.26505	1.28342	1.33710
	Off-highway Vehicle, Modeled	6.88267	6.53779	5.16170	3.16404
Henrico County		13.34123	12.98439	11.90008	10.28768
Hopewell city	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.00873	0.00957	0.01155	0.01365
	Fuel Combustion	0.79801	0.79172	0.81956	0.86020

Table 7.2-4
Stationary Area and Nonroad Mobile Source NOx Emissions

Jurisdiction Name	Category Description	2002	2005	2011	2018
Hopewell city	Other Area Sources	0.00017	0.00020	0.00022	0.00024
	State Developed Non-Road	0.55495	0.48938	0.42400	0.38101
	Off-highway Vehicle, Modeled	0.22460	0.20783	0.13351	0.09111
Hopewell city		1.58646	1.49869	1.38885	1.34620
Petersburg city	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.01321	0.01446	0.01599	0.01882
	Fuel Combustion	0.74876	0.74768	0.77914	0.82077
	Other Area Sources	0.00030	0.00034	0.00039	0.00041
	State Developed Non-Road	0.82516	0.73720	0.65262	0.59870
	Off-highway Vehicle, Modeled	0.25606	0.23652	0.14246	0.08388
Petersburg city		1.84348	1.73620	1.59060	1.52257
Prince George County	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.12648	0.13797	0.04317	0.04990
	Fuel Combustion	0.37921	0.38134	0.40013	0.42279
	Other Area Sources	0.01764	0.01767	0.01770	0.01771
	State Developed Non-Road	1.09076	0.98206	0.88038	0.81783
	Off-highway Vehicle, Modeled	0.71497	0.68328	0.55617	0.37397
Prince George County		2.32906	2.20233	1.89755	1.68220
Richmond city	Waste Management	0.00000	0.00000	0.00000	0.00000
	Solid Waste Burning	0.06614	0.07239	0.08711	0.10226
	Fuel Combustion	6.19738	6.19899	6.47196	6.82763
	Other Area Sources	0.00151	0.00171	0.00197	0.00207
	State Developed Non-Road	1.18915	1.04077	0.89013	0.78836
	Off-highway Vehicle, Modeled	1.99261	1.85782	1.26985	0.90938
Richmond city		9.44679	9.17168	8.72102	8.62970

Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

	Category	Locality	2002	2005	2011	2018
VOC	Aircraft Refueling	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel Ballasting	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel in Transit	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel Loading/Unloading	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Portable Fuel Containers	Charles City County	0.01419	0.01419	0.01485	0.01638
VOC	Tank Truck in Transit	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Tank Truck Loading/Unloading	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	UST Breathing	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Vehicle Refueling and Spillage	Charles City County	0.03040	0.03854	0.02189	0.01253
	TOTAL		0.04459	0.05273	0.03674	0.02891
VOC	Asphalt Paving	Charles City County	0.00005	0.00006	0.00007	0.00008
VOC	Asphalt Roofing	Charles City County	0.00000	0.00001	0.00001	0.00001
VOC	Commercial/Consumer Solvent Use	Charles City County	0.06831	0.07177	0.07756	0.08404
VOC	Dry cleaning	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Graphic Arts	Charles City County	0.01088	0.01127	0.01198	0.01415
VOC	Industrial Adhesives	Charles City County	0.00286	0.00316	0.00390	0.00477
VOC	Lane Markings	Charles City County	0.00543	0.00546	0.00562	0.00558
VOC	Pesticide	Charles City County	0.15208	0.16520	0.19201	0.21648
VOC	Surface Cleaning	Charles City County	0.00371	0.00432	0.00565	0.00663
VOC	Surface Coating	Charles City County	0.09381	0.10382	0.12648	0.14734
	TOTAL		0.33714	0.36506	0.42327	0.47908
VOC	Bakery	Charles City County	0.00351	0.00358	0.00380	0.00409
VOC	Breweries	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Distilleries	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Wineries	Charles City County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00351	0.00358	0.00380	0.00409
VOC	Landfills	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	POTWs	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	TSDF	Charles City County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
VOC	On-Site Incineration	Charles City County	0.00560	0.00612	0.00732	0.00857
VOC	Open Burning	Charles City County	0.03123	0.03407	0.04067	0.04684
	TOTAL		0.03683	0.04018	0.04798	0.05541
VOC	Commercial Fuel Consumption, Coal	Charles City County	0.00003	0.00004	0.00003	0.00003
VOC	Commercial Fuel Consumption, Distillate	Charles City County	0.00001	0.00002	0.00002	0.00002
VOC	Commercial Fuel Consumption, LP Gas	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Commercial Fuel Consumption, Nat Gas	Charles City County	0.00008	0.00009	0.00010	0.00012
VOC	Commercial Fuel Consumption, Residual	Charles City County	0.00000	0.00001	0.00001	0.00001

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
VOC	Commercial Fuel Consumption, Wood	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Industrial Fuel Consumption, Coal	Charles City County	0.00597	0.00571	0.00575	0.00589
VOC	Industrial Fuel Consumption, Distillate	Charles City County	0.00006	0.00006	0.00007	0.00007
VOC	Industrial Fuel Consumption, LP Gas	Charles City County	0.00003	0.00003	0.00003	0.00004
VOC	Industrial Fuel Consumption, Nat Gas	Charles City County	0.00043	0.00046	0.00050	0.00054
VOC	Industrial Fuel Consumption, Residual	Charles City County	0.00002	0.00002	0.00002	0.00002
VOC	Industrial Fuel Consumption, Wood	Charles City County	0.00118	0.00125	0.00139	0.00158
VOC	Residential Fuel Consumption, Coal	Charles City County	0.00004	0.00004	0.00004	0.00003
VOC	Residential Fuel Consumption, Distillate	Charles City County	0.00006	0.00006	0.00006	0.00005
VOC	Residential Fuel Consumption, LP Gas	Charles City County	0.00003	0.00003	0.00003	0.00003
VOC	Residential Fuel Consumption, Nat Gas	Charles City County	0.00020	0.00022	0.00025	0.00028
VOC	Residential Fuel Consumption, Wood	Charles City County	0.00000	0.00000	0.00000	0.00000
TOTAL			0.00817	0.00804	0.00832	0.00873
VOC	Forest Wildfires	Charles City County	0.05115	0.05115	0.05115	0.05115
VOC	Leaking U.S.T.	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Prescribed Burning	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Structural Fires	Charles City County	0.00000	0.00000	0.00000	0.00000
TOTAL			0.05116	0.05116	0.05116	0.05116
VOC	Aviation Emissions, Air Taxi	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, Commercial	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, General Aviation	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, Military	Charles City County	0.00000	0.00000	0.00000	0.00000
VOC	Commercial Marine Vessels	Charles City County	0.04307	0.04431	0.04767	0.05159
VOC	Locomotive	Charles City County	0.01127	0.00976	0.00819	0.00710
VOC	Military Marine Vessels	Charles City County	0.00000	0.00000	0.00000	0.00000
TOTAL			0.05434	0.05407	0.05586	0.05868
VOC	Off-Road, Modeled, 2-Stroke	Charles City County	0.04646	0.03233	0.02004	0.02277
VOC	Off-Road, Modeled, 4-Stroke	Charles City County	0.06520	0.06334	0.05552	0.05940
VOC	Off-Road, Modeled, CNG	Charles City County	0.00007	0.00006	0.00005	0.00003
VOC	Off-Road, Modeled, Diesel	Charles City County	0.03076	0.02695	0.01966	0.01329
VOC	Off-Road, Modeled, LPG	Charles City County	0.00441	0.00403	0.00171	0.00046
VOC	Off-Road, Modeled, Marine, 2-Stroke	Charles City County	1.25189	1.12586	0.86870	0.73169
VOC	Off-Road, Modeled, Marine, 4-Stroke	Charles City County	0.06459	0.06556	0.06645	0.06770
VOC	Off-Road, Modeled, Marine, Diesel	Charles City County	0.00092	0.00099	0.00099	0.00098
VOC	Railroads	Charles City County	0.00034	0.00033	0.00027	0.00021
TOTAL			1.46465	1.31946	1.03341	0.89653
VOC	Aircraft Refueling	Chesterfield County	0.00580	0.00640	0.00789	0.00937
VOC	Petroleum Vessel Ballasting	Chesterfield County	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel in Transit	Chesterfield County	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel Loading/Unloading	Chesterfield County	0.00000	0.00000	0.00000	0.00000

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
VOC	Portable Fuel Containers	Chesterfield County	0.46666	0.46666	0.51174	0.57381
VOC	Tank Truck in Transit	Chesterfield County	0.00855	0.00859	0.00885	0.00878
VOC	Tank Truck Loading/Unloading	Chesterfield County	0.49757	0.50005	0.51480	0.51121
VOC	UST Breathing	Chesterfield County	0.22985	0.23100	0.23781	0.23616
VOC	Vehicle Refueling and Spillage	Chesterfield County	0.38235	0.37776	0.23502	0.20148
	TOTAL		1.59078	1.59046	1.51610	1.54081
VOC	Asphalt Paving	Chesterfield County	0.01578	0.01721	0.02054	0.02366
VOC	Asphalt Roofing	Chesterfield County	0.00103	0.00112	0.00134	0.00154
VOC	Commercial/Consumer Solvent Use	Chesterfield County	2.62490	2.75779	2.98031	3.22963
VOC	Dry cleaning	Chesterfield County	0.00000	0.00000	0.00000	0.00000
VOC	Graphic Arts	Chesterfield County	0.41798	0.43280	0.46005	0.54353
VOC	Industrial Adhesives	Chesterfield County	0.50791	0.56171	0.69284	0.84710
VOC	Lane Markings	Chesterfield County	0.20878	0.20982	0.21601	0.21450
VOC	Pesticide	Chesterfield County	1.43098	1.50713	1.63792	1.78068
VOC	Surface Cleaning	Chesterfield County	0.63715	0.73969	0.96877	1.12827
VOC	Surface Coating	Chesterfield County	4.23095	4.74674	5.80013	6.97698
	TOTAL		10.07546	10.97401	12.77790	14.74590
VOC	Bakery	Chesterfield County	0.13484	0.13774	0.14619	0.15731
VOC	Breweries	Chesterfield County	0.00000	0.00000	0.00000	0.00000
VOC	Distilleries	Chesterfield County	0.00000	0.00000	0.00000	0.00000
VOC	Wineries	Chesterfield County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.13484	0.13774	0.14619	0.15731
VOC	Landfills	Chesterfield County	0.00000	0.00000	0.00000	0.00000
VOC	POTWs	Chesterfield County	0.00000	0.00000	0.00000	0.00000
VOC	TSDF	Chesterfield County	0.15223	0.15806	0.17315	0.20023
	TOTAL		0.15223	0.15806	0.17315	0.20023
VOC	On-Site Incineration	Chesterfield County	0.18847	0.20539	0.24459	0.28453
VOC	Open Burning	Chesterfield County	0.34252	0.37361	0.44599	0.51372
	TOTAL		0.53099	0.57899	0.69057	0.79826
VOC	Commercial Fuel Consumption, Coal	Chesterfield County	0.00372	0.00396	0.00390	0.00389
VOC	Commercial Fuel Consumption, Distillate	Chesterfield County	0.00163	0.00191	0.00216	0.00239
VOC	Commercial Fuel Consumption, LP Gas	Chesterfield County	0.00043	0.00045	0.00046	0.00047
VOC	Commercial Fuel Consumption, Nat Gas	Chesterfield County	0.00918	0.00954	0.01140	0.01300
VOC	Commercial Fuel Consumption, Residual	Chesterfield County	0.00052	0.00079	0.00082	0.00086
VOC	Commercial Fuel Consumption, Wood	Chesterfield County	0.00005	0.00005	0.00005	0.00005
VOC	Industrial Fuel Consumption, Coal	Chesterfield County	0.20929	0.20013	0.20161	0.20622
VOC	Industrial Fuel Consumption, Distillate	Chesterfield County	0.00224	0.00223	0.00232	0.00257
VOC	Industrial Fuel Consumption, LP Gas	Chesterfield County	0.00113	0.00112	0.00121	0.00133
VOC	Industrial Fuel Consumption, Nat Gas	Chesterfield County	0.01501	0.01617	0.01762	0.01902

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
VOC	Industrial Fuel Consumption, Residual	Chesterfield County	0.00075	0.00076	0.00076	0.00083
VOC	Industrial Fuel Consumption, Wood	Chesterfield County	0.04142	0.04388	0.04880	0.05548
VOC	Residential Fuel Consumption, Coal	Chesterfield County	0.00141	0.00143	0.00138	0.00132
VOC	Residential Fuel Consumption, Distillate	Chesterfield County	0.00239	0.00239	0.00224	0.00197
VOC	Residential Fuel Consumption, LP Gas	Chesterfield County	0.00099	0.00098	0.00107	0.00117
VOC	Residential Fuel Consumption, Nat Gas	Chesterfield County	0.00788	0.00852	0.00972	0.01068
VOC	Residential Fuel Consumption, Wood	Chesterfield County	0.00000	0.00000	0.00000	0.00000
TOTAL			0.29804	0.29431	0.30554	0.32125
VOC	Forest Wildfires	Chesterfield County	0.01499	0.01499	0.01499	0.01499
VOC	Leaking U.S.T.	Chesterfield County	0.00006	0.00006	0.00006	0.00006
VOC	Prescribed Burning	Chesterfield County	0.00041	0.00041	0.00041	0.00041
VOC	Structural Fires	Chesterfield County	0.02622	0.02978	0.03424	0.03596
TOTAL			0.04168	0.04524	0.04970	0.05143
VOC	Aviation Emissions, Air Taxi	Chesterfield County	0.00042	0.00046	0.00057	0.00068
VOC	Aviation Emissions, Commercial	Chesterfield County	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, General Aviation	Chesterfield County	0.01962	0.02165	0.02670	0.03170
VOC	Aviation Emissions, Military	Chesterfield County	0.00000	0.00000	0.00000	0.00000
VOC	Commercial Marine Vessels	Chesterfield County	0.01142	0.01175	0.01265	0.01379
VOC	Locomotive	Chesterfield County	0.03111	0.02694	0.02261	0.01959
VOC	Military Marine Vessels	Chesterfield County	0.00000	0.00000	0.00000	0.00000
TOTAL			0.06257	0.06080	0.06252	0.06575
VOC	Off-Road, Modeled, 2-Stroke	Chesterfield County	1.79438	1.41143	1.03239	0.92569
VOC	Off-Road, Modeled, 4-Stroke	Chesterfield County	2.29561	2.25963	1.97258	2.10777
VOC	Off-Road, Modeled, CNG	Chesterfield County	0.00240	0.00220	0.00169	0.00111
VOC	Off-Road, Modeled, Diesel	Chesterfield County	0.41368	0.37193	0.28202	0.19474
VOC	Off-Road, Modeled, LPG	Chesterfield County	0.15514	0.14203	0.06034	0.01631
VOC	Off-Road, Modeled, Marine, 2-Stroke	Chesterfield County	0.73866	0.66376	0.51191	0.43117
VOC	Off-Road, Modeled, Marine, 4-Stroke	Chesterfield County	0.03558	0.03607	0.03655	0.03723
VOC	Off-Road, Modeled, Marine, Diesel	Chesterfield County	0.00051	0.00055	0.00055	0.00054
VOC	Railroads	Chesterfield County	0.00058	0.00055	0.00046	0.00036
TOTAL			5.43652	4.88816	3.89850	3.71492
VOC	Aircraft Refueling	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel Ballasting	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel in Transit	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel Loading/Unloading	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Portable Fuel Containers	Colonial Heights city	0.02250	0.02250	0.02353	0.02611
VOC	Tank Truck in Transit	Colonial Heights city	0.00142	0.00143	0.00147	0.00146
VOC	Tank Truck Loading/Unloading	Colonial Heights city	0.08284	0.08326	0.08571	0.08512
VOC	UST Breathing	Colonial Heights city	0.03827	0.03846	0.03960	0.03932
VOC	Vehicle Refueling and Spillage	Colonial Heights city	0.03134	0.02683	0.01697	0.01385

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
	TOTAL		0.17638	0.17248	0.16728	0.16586
VOC	Asphalt Paving	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Asphalt Roofing	Colonial Heights city	0.00002	0.00003	0.00003	0.00004
VOC	Commercial/Consumer Solvent Use	Colonial Heights city	0.16508	0.17344	0.18743	0.20311
VOC	Dry cleaning	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Graphic Arts	Colonial Heights city	0.02629	0.02722	0.02894	0.03419
VOC	Industrial Adhesives	Colonial Heights city	0.10825	0.11971	0.14766	0.18054
VOC	Lane Markings	Colonial Heights city	0.01313	0.01320	0.01358	0.01349
VOC	Pesticide	Colonial Heights city	0.09306	0.09777	0.10566	0.11450
VOC	Surface Cleaning	Colonial Heights city	0.05056	0.05850	0.07674	0.08894
VOC	Surface Coating	Colonial Heights city	0.20172	0.22359	0.27219	0.31634
	TOTAL		0.65812	0.71345	0.83224	0.95114
VOC	Bakery	Colonial Heights city	0.00848	0.00866	0.00919	0.00989
VOC	Breweries	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Distilleries	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Wineries	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00848	0.00866	0.00919	0.00989
VOC	Landfills	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	POTWs	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	TSDF	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
VOC	On-Site Incineration	Colonial Heights city	0.01140	0.01242	0.01477	0.01715
VOC	Open Burning	Colonial Heights city	0.00104	0.00114	0.00136	0.00156
	TOTAL		0.01245	0.01356	0.01613	0.01871
VOC	Commercial Fuel Consumption, Coal	Colonial Heights city	0.00039	0.00042	0.00041	0.00041
VOC	Commercial Fuel Consumption, Distillate	Colonial Heights city	0.00017	0.00020	0.00023	0.00025
VOC	Commercial Fuel Consumption, LP Gas	Colonial Heights city	0.00004	0.00005	0.00005	0.00005
VOC	Commercial Fuel Consumption, Nat Gas	Colonial Heights city	0.00096	0.00100	0.00120	0.00136
VOC	Commercial Fuel Consumption, Residual	Colonial Heights city	0.00005	0.00008	0.00009	0.00009
VOC	Commercial Fuel Consumption, Wood	Colonial Heights city	0.00001	0.00001	0.00001	0.00001
VOC	Industrial Fuel Consumption, Coal	Colonial Heights city	0.00779	0.00745	0.00751	0.00768
VOC	Industrial Fuel Consumption, Distillate	Colonial Heights city	0.00008	0.00008	0.00009	0.00010
VOC	Industrial Fuel Consumption, LP Gas	Colonial Heights city	0.00004	0.00004	0.00004	0.00005
VOC	Industrial Fuel Consumption, Nat Gas	Colonial Heights city	0.00056	0.00060	0.00066	0.00071
VOC	Industrial Fuel Consumption, Residual	Colonial Heights city	0.00003	0.00003	0.00003	0.00003
VOC	Industrial Fuel Consumption, Wood	Colonial Heights city	0.00154	0.00163	0.00182	0.00207
VOC	Residential Fuel Consumption, Coal	Colonial Heights city	0.00009	0.00009	0.00009	0.00008
VOC	Residential Fuel Consumption, Distillate	Colonial Heights city	0.00015	0.00015	0.00014	0.00012
VOC	Residential Fuel Consumption, LP Gas	Colonial Heights city	0.00006	0.00006	0.00007	0.00007

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
VOC	Residential Fuel Consumption, Nat Gas	Colonial Heights city	0.00050	0.00054	0.00061	0.00067
VOC	Residential Fuel Consumption, Wood	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.01247	0.01243	0.01302	0.01375
VOC	Forest Wildfires	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Leaking U.S.T.	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Prescribed Burning	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Structural Fires	Colonial Heights city	0.00073	0.00083	0.00095	0.00100
	TOTAL		0.00073	0.00083	0.00096	0.00100
VOC	Aviation Emissions, Air Taxi	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, Commercial	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, General Aviation	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, Military	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Commercial Marine Vessels	Colonial Heights city	0.01013	0.01042	0.01121	0.01213
VOC	Locomotive	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
VOC	Military Marine Vessels	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.01013	0.01042	0.01121	0.01213
VOC	Off-Road, Modeled, 2-Stroke	Colonial Heights city	0.06920	0.04605	0.02733	0.03058
VOC	Off-Road, Modeled, 4-Stroke	Colonial Heights city	0.11271	0.11038	0.09648	0.10289
VOC	Off-Road, Modeled, CNG	Colonial Heights city	0.00023	0.00022	0.00017	0.00011
VOC	Off-Road, Modeled, Diesel	Colonial Heights city	0.00434	0.00391	0.00290	0.00199
VOC	Off-Road, Modeled, LPG	Colonial Heights city	0.01509	0.01375	0.00562	0.00134
VOC	Off-Road, Modeled, Marine, 2-Stroke	Colonial Heights city	0.02238	0.02010	0.01551	0.01307
VOC	Off-Road, Modeled, Marine, 4-Stroke	Colonial Heights city	0.00108	0.00109	0.00111	0.00113
VOC	Off-Road, Modeled, Marine, Diesel	Colonial Heights city	0.00002	0.00002	0.00002	0.00002
VOC	Railroads	Colonial Heights city	0.00009	0.00009	0.00007	0.00006
	TOTAL		0.22513	0.19559	0.14922	0.15118
VOC	Aircraft Refueling	Hanover County	0.00781	0.00862	0.01063	0.01262
VOC	Petroleum Vessel Ballasting	Hanover County	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel in Transit	Hanover County	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel Loading/Unloading	Hanover County	0.00000	0.00000	0.00000	0.00000
VOC	Portable Fuel Containers	Hanover County	0.56394	0.56394	0.60664	0.67899
VOC	Tank Truck in Transit	Hanover County	0.00645	0.00649	0.00668	0.00663
VOC	Tank Truck Loading/Unloading	Hanover County	0.37556	0.37743	0.38857	0.38586
VOC	UST Breathing	Hanover County	0.17349	0.17436	0.17950	0.17825
VOC	Vehicle Refueling and Spillage	Hanover County	0.20809	0.19699	0.12836	0.11281
	TOTAL		1.33535	1.32783	1.32038	1.37516
VOC	Asphalt Paving	Hanover County	0.00279	0.00304	0.00363	0.00418
VOC	Asphalt Roofing	Hanover County	0.00038	0.00042	0.00050	0.00057
VOC	Commercial/Consumer Solvent Use	Hanover County	0.88823	0.93321	1.00850	1.09287

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
VOC	Dry cleaning	Hanover County	0.00000	0.00000	0.00000	0.00000
VOC	Graphic Arts	Hanover County	0.14144	0.14645	0.15568	0.18392
VOC	Industrial Adhesives	Hanover County	0.14451	0.15981	0.19712	0.24101
VOC	Lane Markings	Hanover County	0.07065	0.07100	0.07309	0.07259
VOC	Pesticide	Hanover County	0.83089	0.89098	1.00763	1.11988
VOC	Surface Cleaning	Hanover County	0.30735	0.35632	0.46685	0.54248
VOC	Surface Coating	Hanover County	1.95820	2.16910	2.63680	3.12779
	TOTAL		4.34444	4.73033	5.54980	6.38529
VOC	Bakery	Hanover County	0.04563	0.04661	0.04947	0.05323
VOC	Breweries	Hanover County	0.00000	0.00000	0.00000	0.00000
VOC	Distilleries	Hanover County	0.00000	0.00000	0.00000	0.00000
VOC	Wineries	Hanover County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.04563	0.04661	0.04947	0.05323
VOC	Landfills	Hanover County	0.00000	0.00000	0.00000	0.00000
VOC	POTWs	Hanover County	0.00000	0.00000	0.00000	0.00000
VOC	TSDF	Hanover County	0.00002	0.00002	0.00002	0.00003
	TOTAL		0.00002	0.00002	0.00002	0.00003
VOC	On-Site Incineration	Hanover County	0.07106	0.07756	0.09271	0.10844
VOC	Open Burning	Hanover County	0.18219	0.19873	0.23723	0.27326
	TOTAL		0.25325	0.27629	0.32993	0.38169
VOC	Commercial Fuel Consumption, Coal	Hanover County	0.00128	0.00136	0.00135	0.00134
VOC	Commercial Fuel Consumption, Distillate	Hanover County	0.00056	0.00066	0.00075	0.00082
VOC	Commercial Fuel Consumption, LP Gas	Hanover County	0.00015	0.00016	0.00016	0.00016
VOC	Commercial Fuel Consumption, Nat Gas	Hanover County	0.00317	0.00329	0.00393	0.00448
VOC	Commercial Fuel Consumption, Residual	Hanover County	0.00018	0.00027	0.00028	0.00030
VOC	Commercial Fuel Consumption, Wood	Hanover County	0.00002	0.00002	0.00002	0.00002
VOC	Industrial Fuel Consumption, Coal	Hanover County	0.07616	0.07282	0.07336	0.07504
VOC	Industrial Fuel Consumption, Distillate	Hanover County	0.00082	0.00081	0.00084	0.00093
VOC	Industrial Fuel Consumption, LP Gas	Hanover County	0.00041	0.00041	0.00044	0.00048
VOC	Industrial Fuel Consumption, Nat Gas	Hanover County	0.00546	0.00588	0.00641	0.00692
VOC	Industrial Fuel Consumption, Residual	Hanover County	0.00027	0.00028	0.00028	0.00030
VOC	Industrial Fuel Consumption, Wood	Hanover County	0.01507	0.01597	0.01776	0.02019
VOC	Residential Fuel Consumption, Coal	Hanover County	0.00048	0.00049	0.00047	0.00045
VOC	Residential Fuel Consumption, Distillate	Hanover County	0.00081	0.00081	0.00076	0.00067
VOC	Residential Fuel Consumption, LP Gas	Hanover County	0.00034	0.00033	0.00036	0.00039
VOC	Residential Fuel Consumption, Nat Gas	Hanover County	0.00266	0.00288	0.00329	0.00361
VOC	Residential Fuel Consumption, Wood	Hanover County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.10783	0.10643	0.11045	0.11611
VOC	Forest Wildfires	Hanover County	0.00447	0.00447	0.00447	0.00447

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
VOC	Leaking U.S.T.	Hanover County	0.00006	0.00006	0.00006	0.00006
VOC	Prescribed Burning	Hanover County	0.02663	0.02663	0.02663	0.02663
VOC	Structural Fires	Hanover County	0.00879	0.00998	0.01147	0.01205
	TOTAL		0.03994	0.04113	0.04263	0.04320
VOC	Aviation Emissions, Air Taxi	Hanover County	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, Commercial	Hanover County	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, General Aviation	Hanover County	0.01561	0.01722	0.02124	0.02522
VOC	Aviation Emissions, Military	Hanover County	0.00000	0.00000	0.00000	0.00000
VOC	Commercial Marine Vessels	Hanover County	0.00000	0.00000	0.00000	0.00000
VOC	Locomotive	Hanover County	0.01758	0.01523	0.01278	0.01107
VOC	Military Marine Vessels	Hanover County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.03319	0.03245	0.03402	0.03629
VOC	Off-Road, Modeled, 2-Stroke	Hanover County	2.43942	1.72593	1.16125	1.15079
VOC	Off-Road, Modeled, 4-Stroke	Hanover County	2.37991	2.31350	1.87950	2.02653
VOC	Off-Road, Modeled, CNG	Hanover County	0.00089	0.00078	0.00058	0.00039
VOC	Off-Road, Modeled, Diesel	Hanover County	0.22566	0.20290	0.15339	0.10759
VOC	Off-Road, Modeled, LPG	Hanover County	0.05737	0.05264	0.02295	0.00687
VOC	Off-Road, Modeled, Marine, 2-Stroke	Hanover County	0.06712	0.06035	0.04654	0.03920
VOC	Off-Road, Modeled, Marine, 4-Stroke	Hanover County	0.00323	0.00328	0.00332	0.00338
VOC	Off-Road, Modeled, Marine, Diesel	Hanover County	0.00005	0.00005	0.00005	0.00005
VOC	Railroads	Hanover County	0.00201	0.00192	0.00161	0.00125
	TOTAL		5.17566	4.36135	3.26920	3.33604
VOC	Aircraft Refueling	Henrico County	0.03674	0.04053	0.04999	0.05935
VOC	Petroleum Vessel Ballasting	Henrico County	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel in Transit	Henrico County	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel Loading/Unloading	Henrico County	0.00000	0.00000	0.00000	0.00000
VOC	Portable Fuel Containers	Henrico County	0.42860	0.42860	0.45651	0.51208
VOC	Tank Truck in Transit	Henrico County	0.00898	0.00902	0.00929	0.00922
VOC	Tank Truck Loading/Unloading	Henrico County	0.52247	0.52508	0.54056	0.53680
VOC	UST Breathing	Henrico County	0.24136	0.24256	0.24971	0.24798
VOC	Vehicle Refueling and Spillage	Henrico County	0.41486	0.38072	0.23492	0.20021
	TOTAL		1.65301	1.62652	1.54098	1.56564
VOC	Asphalt Paving	Henrico County	0.00122	0.00133	0.00158	0.00182
VOC	Asphalt Roofing	Henrico County	0.00093	0.00101	0.00121	0.00139
VOC	Commercial/Consumer Solvent Use	Henrico County	2.63266	2.76595	2.98913	3.23919
VOC	Dry cleaning	Henrico County	0.00000	0.00000	0.00000	0.00000
VOC	Graphic Arts	Henrico County	0.41921	0.43407	0.46140	0.54513
VOC	Industrial Adhesives	Henrico County	0.71202	0.78743	0.97126	1.18752
VOC	Lane Markings	Henrico County	0.20940	0.21044	0.21665	0.21514
VOC	Pesticide	Henrico County	1.45401	1.53247	1.66815	1.81522

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
VOC	Surface Cleaning	Henrico County	1.00871	1.17161	1.54141	1.80642
VOC	Surface Coating	Henrico County	4.00017	4.43372	5.30446	6.33070
	TOTAL		10.43832	11.33803	13.15524	15.14252
VOC	Bakery	Henrico County	0.13524	0.13814	0.14663	0.15777
VOC	Breweries	Henrico County	0.00000	0.00000	0.00000	0.00000
VOC	Distilleries	Henrico County	0.00000	0.00000	0.00000	0.00000
VOC	Wineries	Henrico County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.13524	0.13814	0.14663	0.15777
VOC	Landfills	Henrico County	0.01789	0.01857	0.02035	0.02353
VOC	POTWs	Henrico County	0.00000	0.00000	0.00000	0.00000
VOC	TSDF	Henrico County	0.00055	0.00057	0.00062	0.00072
	TOTAL		0.01844	0.01914	0.02097	0.02425
VOC	On-Site Incineration	Henrico County	0.21306	0.23257	0.27809	0.32546
VOC	Open Burning	Henrico County	0.06168	0.06728	0.08032	0.09252
	TOTAL		0.27474	0.29986	0.35841	0.41798
VOC	Commercial Fuel Consumption, Coal	Henrico County	0.00635	0.00676	0.00667	0.00665
VOC	Commercial Fuel Consumption, Distillate	Henrico County	0.00279	0.00327	0.00370	0.00408
VOC	Commercial Fuel Consumption, LP Gas	Henrico County	0.00073	0.00078	0.00078	0.00081
VOC	Commercial Fuel Consumption, Nat Gas	Henrico County	0.01570	0.01631	0.01949	0.02222
VOC	Commercial Fuel Consumption, Residual	Henrico County	0.00088	0.00135	0.00141	0.00146
VOC	Commercial Fuel Consumption, Wood	Henrico County	0.00009	0.00009	0.00009	0.00009
VOC	Industrial Fuel Consumption, Coal	Henrico County	0.22139	0.21170	0.21326	0.21814
VOC	Industrial Fuel Consumption, Distillate	Henrico County	0.00237	0.00236	0.00245	0.00272
VOC	Industrial Fuel Consumption, LP Gas	Henrico County	0.00119	0.00118	0.00128	0.00141
VOC	Industrial Fuel Consumption, Nat Gas	Henrico County	0.01587	0.01710	0.01864	0.02012
VOC	Industrial Fuel Consumption, Residual	Henrico County	0.00080	0.00081	0.00081	0.00088
VOC	Industrial Fuel Consumption, Wood	Henrico County	0.04381	0.04641	0.05162	0.05868
VOC	Residential Fuel Consumption, Coal	Henrico County	0.00141	0.00144	0.00138	0.00132
VOC	Residential Fuel Consumption, Distillate	Henrico County	0.00240	0.00239	0.00225	0.00198
VOC	Residential Fuel Consumption, LP Gas	Henrico County	0.00100	0.00098	0.00108	0.00117
VOC	Residential Fuel Consumption, Nat Gas	Henrico County	0.00790	0.00854	0.00975	0.01071
VOC	Residential Fuel Consumption, Wood	Henrico County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.32469	0.32148	0.33466	0.35245
VOC	Forest Wildfires	Henrico County	0.01038	0.01038	0.01038	0.01038
VOC	Leaking U.S.T.	Henrico County	0.00010	0.00010	0.00010	0.00010
VOC	Prescribed Burning	Henrico County	0.00000	0.00000	0.00000	0.00000
VOC	Structural Fires	Henrico County	0.00811	0.00921	0.01059	0.01112
	TOTAL		0.01859	0.01969	0.02108	0.02161

Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
VOC	Aviation Emissions, Air Taxi	Henrico County	0.03421	0.03775	0.04655	0.05526
VOC	Aviation Emissions, Commercial	Henrico County	0.06344	0.07000	0.08632	0.10248
VOC	Aviation Emissions, General Aviation	Henrico County	0.01216	0.01342	0.01655	0.01964
VOC	Aviation Emissions, Military	Henrico County	0.01549	0.01746	0.01891	0.02157
VOC	Commercial Marine Vessels	Henrico County	0.01182	0.01217	0.01310	0.01425
VOC	Locomotive	Henrico County	0.03156	0.02733	0.02293	0.01987
VOC	Military Marine Vessels	Henrico County	0.00000	0.00000	0.00000	0.00000
TOTAL			0.16868	0.17812	0.20436	0.23308
VOC	Off-Road, Modeled, 2-Stroke	Henrico County	1.40094	0.92381	0.55206	0.60991
VOC	Off-Road, Modeled, 4-Stroke	Henrico County	2.24440	2.19609	1.90509	2.05181
VOC	Off-Road, Modeled, CNG	Henrico County	0.00243	0.00221	0.00169	0.00111
VOC	Off-Road, Modeled, Diesel	Henrico County	0.67772	0.60901	0.46184	0.31895
VOC	Off-Road, Modeled, LPG	Henrico County	0.15731	0.14414	0.06192	0.01723
VOC	Off-Road, Modeled, Marine, 2-Stroke	Henrico County	0.29090	0.26133	0.20166	0.16986
VOC	Off-Road, Modeled, Marine, 4-Stroke	Henrico County	0.01400	0.01419	0.01440	0.01467
VOC	Off-Road, Modeled, Marine, Diesel	Henrico County	0.00020	0.00021	0.00022	0.00021
VOC	Railroads	Henrico County	0.00266	0.00253	0.00212	0.00165
TOTAL			4.79056	4.15353	3.20099	3.18540
VOC	Aircraft Refueling	Hopewell city	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel Ballasting	Hopewell city	0.00172	0.00187	0.00185	0.00176
VOC	Petroleum Vessel in Transit	Hopewell city	0.00005	0.00006	0.00006	0.00007
VOC	Petroleum Vessel Loading/Unloading	Hopewell city	0.00006	0.00006	0.00006	0.00006
VOC	Portable Fuel Containers	Hopewell city	0.04624	0.04624	0.04834	0.05367
VOC	Tank Truck in Transit	Hopewell city	0.00096	0.00096	0.00099	0.00098
VOC	Tank Truck Loading/Unloading	Hopewell city	0.05563	0.05591	0.05756	0.05716
VOC	UST Breathing	Hopewell city	0.02570	0.02583	0.02659	0.02641
VOC	Vehicle Refueling and Spillage	Hopewell city	0.02016	0.02242	0.01528	0.01230
TOTAL			0.15052	0.15335	0.15074	0.15241
VOC	Asphalt Paving	Hopewell city	0.00000	0.00000	0.00000	0.00000
VOC	Asphalt Roofing	Hopewell city	0.00016	0.00017	0.00021	0.00024
VOC	Commercial/Consumer Solvent Use	Hopewell city	0.21478	0.22565	0.24386	0.26426
VOC	Dry cleaning	Hopewell city	0.00000	0.00000	0.00000	0.00000
VOC	Graphic Arts	Hopewell city	0.03420	0.03541	0.03764	0.04447
VOC	Industrial Adhesives	Hopewell city	0.12032	0.13307	0.16413	0.20067
VOC	Lane Markings	Hopewell city	0.01708	0.01717	0.01767	0.01755
VOC	Pesticide	Hopewell city	0.11897	0.12499	0.13508	0.14638
VOC	Surface Cleaning	Hopewell city	0.02244	0.02595	0.03399	0.03929
VOC	Surface Coating	Hopewell city	0.25691	0.28653	0.34758	0.41259
TOTAL			0.78486	0.84894	0.98016	1.12546
VOC	Bakery	Hopewell city	0.01103	0.01127	0.01196	0.01287

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
VOC	Breweries	Hopewell city	0.00000	0.00000	0.00000	0.00000
VOC	Distilleries	Hopewell city	0.00000	0.00000	0.00000	0.00000
VOC	Wineries	Hopewell city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.01103	0.01127	0.01196	0.01287
VOC	Landfills	Hopewell city	0.00000	0.00000	0.00000	0.00000
VOC	POTWs	Hopewell city	0.00000	0.00000	0.00000	0.00000
VOC	TSDF	Hopewell city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
VOC	On-Site Incineration	Hopewell city	0.02103	0.02301	0.02767	0.03264
VOC	Open Burning	Hopewell city	0.00026	0.00028	0.00034	0.00039
	TOTAL		0.02129	0.02330	0.02801	0.03303
VOC	Commercial Fuel Consumption, Coal	Hopewell city	0.00023	0.00025	0.00025	0.00025
VOC	Commercial Fuel Consumption, Distillate	Hopewell city	0.00010	0.00012	0.00014	0.00015
VOC	Commercial Fuel Consumption, LP Gas	Hopewell city	0.00003	0.00003	0.00003	0.00003
VOC	Commercial Fuel Consumption, Nat Gas	Hopewell city	0.00058	0.00060	0.00072	0.00082
VOC	Commercial Fuel Consumption, Residual	Hopewell city	0.00003	0.00005	0.00005	0.00005
VOC	Commercial Fuel Consumption, Wood	Hopewell city	0.00000	0.00000	0.00000	0.00000
VOC	Industrial Fuel Consumption, Coal	Hopewell city	0.04053	0.03875	0.03904	0.03993
VOC	Industrial Fuel Consumption, Distillate	Hopewell city	0.00043	0.00043	0.00045	0.00050
VOC	Industrial Fuel Consumption, LP Gas	Hopewell city	0.00022	0.00022	0.00023	0.00026
VOC	Industrial Fuel Consumption, Nat Gas	Hopewell city	0.00291	0.00313	0.00341	0.00368
VOC	Industrial Fuel Consumption, Residual	Hopewell city	0.00015	0.00015	0.00015	0.00016
VOC	Industrial Fuel Consumption, Wood	Hopewell city	0.00802	0.00850	0.00945	0.01074
VOC	Residential Fuel Consumption, Coal	Hopewell city	0.00012	0.00012	0.00011	0.00011
VOC	Residential Fuel Consumption, Distillate	Hopewell city	0.00020	0.00020	0.00018	0.00016
VOC	Residential Fuel Consumption, LP Gas	Hopewell city	0.00008	0.00008	0.00009	0.00010
VOC	Residential Fuel Consumption, Nat Gas	Hopewell city	0.00064	0.00070	0.00080	0.00087
VOC	Residential Fuel Consumption, Wood	Hopewell city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.05427	0.05332	0.05510	0.05782
VOC	Forest Wildfires	Hopewell city	0.00000	0.00000	0.00000	0.00000
VOC	Leaking U.S.T.	Hopewell city	0.00001	0.00001	0.00001	0.00001
VOC	Prescribed Burning	Hopewell city	0.00000	0.00000	0.00000	0.00000
VOC	Structural Fires	Hopewell city	0.00135	0.00153	0.00176	0.00185
	TOTAL		0.00137	0.00155	0.00178	0.00187
VOC	Aviation Emissions, Air Taxi	Hopewell city	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, Commercial	Hopewell city	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, General Aviation	Hopewell city	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, Military	Hopewell city	0.00000	0.00000	0.00000	0.00000
VOC	Commercial Marine Vessels	Hopewell city	0.00944	0.00972	0.01046	0.01138

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
VOC	Locomotive	Hopewell city	0.02074	0.01796	0.01507	0.01306
VOC	Military Marine Vessels	Hopewell city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.03018	0.02767	0.02553	0.02443
VOC	Off-Road, Modeled, 2-Stroke	Hopewell city	0.16475	0.10763	0.06426	0.07204
VOC	Off-Road, Modeled, 4-Stroke	Hopewell city	0.21486	0.20862	0.17528	0.18751
VOC	Off-Road, Modeled, CNG	Hopewell city	0.00042	0.00040	0.00031	0.00020
VOC	Off-Road, Modeled, Diesel	Hopewell city	0.00805	0.00732	0.00548	0.00384
VOC	Off-Road, Modeled, LPG	Hopewell city	0.02786	0.02540	0.01034	0.00244
VOC	Off-Road, Modeled, Marine, 2-Stroke	Hopewell city	0.02238	0.02010	0.01551	0.01307
VOC	Off-Road, Modeled, Marine, 4-Stroke	Hopewell city	0.00108	0.00109	0.00111	0.00113
VOC	Off-Road, Modeled, Marine, Diesel	Hopewell city	0.00002	0.00002	0.00002	0.00002
VOC	Railroads	Hopewell city	0.00003	0.00002	0.00002	0.00002
	TOTAL		0.43942	0.37059	0.27232	0.28027
VOC	Aircraft Refueling	Petersburg city	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel Ballasting	Petersburg city	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel in Transit	Petersburg city	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel Loading/Unloading	Petersburg city	0.00000	0.00000	0.00000	0.00000
VOC	Portable Fuel Containers	Petersburg city	0.03333	0.03333	0.03497	0.03885
VOC	Tank Truck in Transit	Petersburg city	0.00722	0.00457	0.00348	0.00345
VOC	Tank Truck Loading/Unloading	Petersburg city	0.70247	0.70597	0.22247	0.22092
VOC	UST Breathing	Petersburg city	0.08226	0.08267	0.08510	0.08451
VOC	Vehicle Refueling and Spillage	Petersburg city	0.22012	0.17164	0.09524	0.05300
	TOTAL		1.04539	0.99818	0.44126	0.40073
VOC	Asphalt Paving	Petersburg city	0.00000	0.00000	0.00000	0.00000
VOC	Asphalt Roofing	Petersburg city	0.00003	0.00004	0.00004	0.00005
VOC	Commercial/Consumer Solvent Use	Petersburg city	0.31800	0.33410	0.36106	0.39126
VOC	Dry cleaning	Petersburg city	0.00000	0.00000	0.00000	0.00000
VOC	Graphic Arts	Petersburg city	0.08220	0.08512	0.05573	0.06585
VOC	Industrial Adhesives	Petersburg city	0.14615	0.16163	0.19936	0.24376
VOC	Lane Markings	Petersburg city	0.02529	0.02542	0.02617	0.02599
VOC	Pesticide	Petersburg city	0.17676	0.18571	0.20069	0.21748
VOC	Surface Cleaning	Petersburg city	0.28389	0.32940	0.18607	0.21700
VOC	Surface Coating	Petersburg city	0.70499	0.78703	0.97199	1.16450
	TOTAL		1.73731	1.90845	2.00112	2.32588
VOC	Bakery	Petersburg city	0.01634	0.01669	0.01771	0.01906
VOC	Breweries	Petersburg city	0.00000	0.00000	0.00000	0.00000
VOC	Distilleries	Petersburg city	0.00000	0.00000	0.00000	0.00000
VOC	Wineries	Petersburg city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.01634	0.01669	0.01771	0.01906

Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
VOC	Landfills	Petersburg city	0.00000	0.00000	0.00000	0.00000
VOC	POTWs	Petersburg city	0.00000	0.00000	0.00000	0.00000
VOC	TSDF	Petersburg city	0.00003	0.00003	0.00003	0.00003
	TOTAL		0.00003	0.00003	0.00003	0.00003
VOC	On-Site Incineration	Petersburg city	0.02857	0.03122	0.03745	0.04404
VOC	Open Burning	Petersburg city	0.00651	0.00710	0.00169	0.00195
	TOTAL		0.03507	0.03832	0.03915	0.04599
VOC	Commercial Fuel Consumption, Coal	Petersburg city	0.00057	0.00061	0.00060	0.00059
VOC	Commercial Fuel Consumption, Distillate	Petersburg city	0.00025	0.00029	0.00033	0.00037
VOC	Commercial Fuel Consumption, LP Gas	Petersburg city	0.00007	0.00007	0.00007	0.00007
VOC	Commercial Fuel Consumption, Nat Gas	Petersburg city	0.00141	0.00146	0.00174	0.00199
VOC	Commercial Fuel Consumption, Residual	Petersburg city	0.00008	0.00012	0.00013	0.00013
VOC	Commercial Fuel Consumption, Wood	Petersburg city	0.00001	0.00001	0.00001	0.00001
VOC	Industrial Fuel Consumption, Coal	Petersburg city	0.03556	0.03401	0.03426	0.03504
VOC	Industrial Fuel Consumption, Distillate	Petersburg city	0.00038	0.00038	0.00039	0.00044
VOC	Industrial Fuel Consumption, LP Gas	Petersburg city	0.00019	0.00019	0.00021	0.00023
VOC	Industrial Fuel Consumption, Nat Gas	Petersburg city	0.00255	0.00275	0.00299	0.00323
VOC	Industrial Fuel Consumption, Residual	Petersburg city	0.00013	0.00013	0.00013	0.00014
VOC	Industrial Fuel Consumption, Wood	Petersburg city	0.00704	0.00746	0.00829	0.00943
VOC	Residential Fuel Consumption, Coal	Petersburg city	0.00017	0.00017	0.00017	0.00016
VOC	Residential Fuel Consumption, Distillate	Petersburg city	0.00029	0.00029	0.00027	0.00024
VOC	Residential Fuel Consumption, LP Gas	Petersburg city	0.00012	0.00012	0.00013	0.00014
VOC	Residential Fuel Consumption, Nat Gas	Petersburg city	0.00095	0.00103	0.00118	0.00129
VOC	Residential Fuel Consumption, Wood	Petersburg city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.04976	0.04908	0.05089	0.05350
VOC	Forest Wildfires	Petersburg city	0.00000	0.00000	0.00000	0.00000
VOC	Leaking U.S.T.	Petersburg city	0.00001	0.00001	0.00001	0.00001
VOC	Prescribed Burning	Petersburg city	0.00000	0.00000	0.00000	0.00000
VOC	Structural Fires	Petersburg city	0.00234	0.00266	0.00305	0.00321
	TOTAL		0.00235	0.00267	0.00307	0.00322
VOC	Aviation Emissions, Air Taxi	Petersburg city	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, Commercial	Petersburg city	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, General Aviation	Petersburg city	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, Military	Petersburg city	0.00040	0.00045	0.00049	0.00056
VOC	Commercial Marine Vessels	Petersburg city	0.02533	0.02606	0.02803	0.03033
VOC	Locomotive	Petersburg city	0.02840	0.02459	0.02064	0.01788
VOC	Military Marine Vessels	Petersburg city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.05414	0.05111	0.04916	0.04877
VOC	Off-Road, Modeled, 2-Stroke	Petersburg city	0.07482	0.05142	0.03084	0.03442

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
VOC	Off-Road, Modeled, 4-Stroke	Petersburg city	0.20246	0.19935	0.18033	0.19174
VOC	Off-Road, Modeled, CNG	Petersburg city	0.00061	0.00057	0.00042	0.00027
VOC	Off-Road, Modeled, Diesel	Petersburg city	0.00898	0.00810	0.00598	0.00400
VOC	Off-Road, Modeled, LPG	Petersburg city	0.03735	0.03409	0.01398	0.00335
VOC	Off-Road, Modeled, Marine, 2-Stroke	Petersburg city	0.02314	0.02083	0.01619	0.01373
VOC	Off-Road, Modeled, Marine, 4-Stroke	Petersburg city	0.00122	0.00123	0.00124	0.00127
VOC	Off-Road, Modeled, Marine, Diesel	Petersburg city	0.00002	0.00002	0.00002	0.00002
VOC	Railroads	Petersburg city	0.00106	0.00101	0.00085	0.00067
	TOTAL		0.34966	0.31662	0.24984	0.24946
VOC	Aircraft Refueling	Prince George County	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel Ballasting	Prince George County	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel in Transit	Prince George County	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel Loading/Unloading	Prince George County	0.00000	0.00000	0.00000	0.00000
VOC	Portable Fuel Containers	Prince George County	0.04726	0.04726	0.06095	0.06860
VOC	Tank Truck in Transit	Prince George County	0.00382	0.00384	0.00184	0.00183
VOC	Tank Truck Loading/Unloading	Prince George County	0.37149	0.37334	0.11764	0.11682
VOC	UST Breathing	Prince George County	0.04350	0.04372	0.04501	0.04469
VOC	Vehicle Refueling and Spillage	Prince George County	0.29108	0.24000	0.12265	0.07582
	TOTAL		0.75715	0.70815	0.34809	0.30777
VOC	Asphalt Paving	Prince George County	0.00047	0.00051	0.00040	0.00046
VOC	Asphalt Roofing	Prince George County	0.00004	0.00004	0.00005	0.00006
VOC	Commercial/Consumer Solvent Use	Prince George County	0.33183	0.34863	0.37676	0.40828
VOC	Dry cleaning	Prince George County	0.00000	0.00000	0.00000	0.00000
VOC	Graphic Arts	Prince George County	0.08578	0.08882	0.05816	0.06871
VOC	Industrial Adhesives	Prince George County	0.02735	0.03024	0.03730	0.04561
VOC	Lane Markings	Prince George County	0.02639	0.02652	0.02731	0.02712
VOC	Pesticide	Prince George County	0.33818	0.36356	0.41340	0.46078
VOC	Surface Cleaning	Prince George County	0.08722	0.10095	0.05642	0.06537
VOC	Surface Coating	Prince George County	0.29962	0.33597	0.41468	0.48394
	TOTAL		1.19688	1.29525	1.38448	1.56033
VOC	Bakery	Prince George County	0.01705	0.01741	0.01848	0.01989
VOC	Breweries	Prince George County	0.00000	0.00000	0.00000	0.00000
VOC	Distilleries	Prince George County	0.00000	0.00000	0.00000	0.00000
VOC	Wineries	Prince George County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.01705	0.01741	0.01848	0.01989
VOC	Landfills	Prince George County	0.00000	0.00000	0.00000	0.00000
VOC	POTWs	Prince George County	0.00000	0.00000	0.00000	0.00000
VOC	TSDF	Prince George County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000

Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category	Locality	2002	2005	2011	2018
VOC On-Site Incineration	Prince George County	0.02317	0.02524	0.03002	0.03487
VOC Open Burning	Prince George County	0.55438	0.60470	0.14437	0.16630
TOTAL		0.57755	0.62994	0.17439	0.20117
VOC Commercial Fuel Consumption, Coal	Prince George County	0.00045	0.00048	0.00047	0.00047
VOC Commercial Fuel Consumption, Distillate	Prince George County	0.00020	0.00023	0.00026	0.00029
VOC Commercial Fuel Consumption, LP Gas	Prince George County	0.00005	0.00005	0.00006	0.00006
VOC Commercial Fuel Consumption, Nat Gas	Prince George County	0.00111	0.00115	0.00138	0.00157
VOC Commercial Fuel Consumption, Residual	Prince George County	0.00006	0.00010	0.00010	0.00010
VOC Commercial Fuel Consumption, Wood	Prince George County	0.00001	0.00001	0.00001	0.00001
VOC Industrial Fuel Consumption, Coal	Prince George County	0.01642	0.01570	0.01581	0.01617
VOC Industrial Fuel Consumption, Distillate	Prince George County	0.00018	0.00018	0.00018	0.00020
VOC Industrial Fuel Consumption, LP Gas	Prince George County	0.00009	0.00009	0.00009	0.00010
VOC Industrial Fuel Consumption, Nat Gas	Prince George County	0.00118	0.00127	0.00138	0.00149
VOC Industrial Fuel Consumption, Residual	Prince George County	0.00006	0.00006	0.00006	0.00007
VOC Industrial Fuel Consumption, Wood	Prince George County	0.00325	0.00344	0.00383	0.00435
VOC Residential Fuel Consumption, Coal	Prince George County	0.00018	0.00018	0.00017	0.00017
VOC Residential Fuel Consumption, Distillate	Prince George County	0.00030	0.00030	0.00028	0.00025
VOC Residential Fuel Consumption, LP Gas	Prince George County	0.00013	0.00012	0.00014	0.00015
VOC Residential Fuel Consumption, Nat Gas	Prince George County	0.00100	0.00108	0.00123	0.00135
VOC Residential Fuel Consumption, Wood	Prince George County	0.00000	0.00000	0.00000	0.00000
TOTAL		0.02464	0.02443	0.02545	0.02680
VOC Forest Wildfires	Prince George County	0.00762	0.00762	0.00762	0.00762
VOC Leaking U.S.T.	Prince George County	0.00002	0.00002	0.00002	0.00002
VOC Prescribed Burning	Prince George County	0.00627	0.00627	0.00627	0.00627
VOC Structural Fires	Prince George County	0.00154	0.00175	0.00201	0.00212
TOTAL		0.01545	0.01566	0.01592	0.01602
VOC Aviation Emissions, Air Taxi	Prince George County	0.00000	0.00000	0.00000	0.00000
VOC Aviation Emissions, Commercial	Prince George County	0.00000	0.00000	0.00000	0.00000
VOC Aviation Emissions, General Aviation	Prince George County	0.00000	0.00000	0.00000	0.00000
VOC Aviation Emissions, Military	Prince George County	0.00000	0.00000	0.00000	0.00000
VOC Commercial Marine Vessels	Prince George County	0.04197	0.04318	0.04645	0.05026
VOC Locomotive	Prince George County	0.03562	0.03084	0.02588	0.02243
VOC Military Marine Vessels	Prince George County	0.00000	0.00000	0.00000	0.00000
TOTAL		0.07759	0.07402	0.07234	0.07268
VOC Off-Road, Modeled, 2-Stroke	Prince George County	0.32293	0.37617	0.35370	0.24339
VOC Off-Road, Modeled, 4-Stroke	Prince George County	0.24617	0.25594	0.24955	0.25435
VOC Off-Road, Modeled, CNG	Prince George County	0.00028	0.00025	0.00018	0.00012
VOC Off-Road, Modeled, Diesel	Prince George County	0.06620	0.05845	0.04312	0.02926
VOC Off-Road, Modeled, LPG	Prince George County	0.01662	0.01519	0.00636	0.00163
VOC Off-Road, Modeled, Marine, 2-Stroke	Prince George County	0.97194	0.87479	0.67985	0.57660

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
VOC	Off-Road, Modeled, Marine, 4-Stroke	Prince George County	0.05103	0.05154	0.05224	0.05322
VOC	Off-Road, Modeled, Marine, Diesel	Prince George County	0.00065	0.00070	0.00070	0.00068
VOC	Railroads	Prince George County	0.00094	0.00089	0.00075	0.00059
	TOTAL		1.67675	1.63392	1.38644	1.15985
VOC	Aircraft Refueling	Richmond city	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel Ballasting	Richmond city	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel in Transit	Richmond city	0.00000	0.00000	0.00000	0.00000
VOC	Petroleum Vessel Loading/Unloading	Richmond city	0.00000	0.00000	0.00000	0.00000
VOC	Portable Fuel Containers	Richmond city	0.42322	0.42322	0.45038	0.50521
VOC	Tank Truck in Transit	Richmond city	0.00686	0.00690	0.00710	0.00705
VOC	Tank Truck Loading/Unloading	Richmond city	0.39939	0.40138	0.41322	0.41035
VOC	UST Breathing	Richmond city	0.18450	0.18542	0.19089	0.18956
VOC	Vehicle Refueling and Spillage	Richmond city	0.29203	0.24728	0.15807	0.12224
	TOTAL		1.30601	1.26420	1.21966	1.23440
VOC	Asphalt Paving	Richmond city	0.00010	0.00011	0.00013	0.00015
VOC	Asphalt Roofing	Richmond city	0.00116	0.00127	0.00151	0.00174
VOC	Commercial/Consumer Solvent Use	Richmond city	1.90284	1.99918	2.16049	2.34123
VOC	Dry cleaning	Richmond city	0.00000	0.00000	0.00000	0.00000
VOC	Graphic Arts	Richmond city	0.30300	0.31374	0.33350	0.39401
VOC	Industrial Adhesives	Richmond city	1.68969	1.86866	2.30489	2.81809
VOC	Lane Markings	Richmond city	0.15135	0.15210	0.15659	0.15550
VOC	Pesticide	Richmond city	0.98765	1.03765	1.12138	1.21519
VOC	Surface Cleaning	Richmond city	0.37584	0.43611	0.57117	0.66455
VOC	Surface Coating	Richmond city	3.74637	4.13497	4.86963	5.86183
	TOTAL		9.15800	9.94380	11.51928	13.45230
VOC	Bakery	Richmond city	0.09775	0.09985	0.10598	0.11404
VOC	Breweries	Richmond city	0.00000	0.00000	0.00000	0.00000
VOC	Distilleries	Richmond city	0.00000	0.00000	0.00000	0.00000
VOC	Wineries	Richmond city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.09775	0.09985	0.10598	0.11404
VOC	Landfills	Richmond city	0.00000	0.00000	0.00000	0.00000
VOC	POTWs	Richmond city	0.00000	0.00000	0.00000	0.00000
VOC	TSDF	Richmond city	0.01157	0.01202	0.01316	0.01522
	TOTAL		0.01157	0.01202	0.01316	0.01522
VOC	On-Site Incineration	Richmond city	0.15817	0.17272	0.20670	0.24221
VOC	Open Burning	Richmond city	0.00130	0.00142	0.00169	0.00195
	TOTAL		0.15947	0.17414	0.20840	0.24416
VOC	Commercial Fuel Consumption, Coal	Richmond city	0.00577	0.00614	0.00606	0.00604

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
VOC	Commercial Fuel Consumption, Distillate	Richmond city	0.00253	0.00297	0.00336	0.00371
VOC	Commercial Fuel Consumption, LP Gas	Richmond city	0.00066	0.00070	0.00071	0.00073
VOC	Commercial Fuel Consumption, Nat Gas	Richmond city	0.01426	0.01481	0.01770	0.02018
VOC	Commercial Fuel Consumption, Residual	Richmond city	0.00080	0.00123	0.00128	0.00133
VOC	Commercial Fuel Consumption, Wood	Richmond city	0.00008	0.00008	0.00008	0.00008
VOC	Industrial Fuel Consumption, Coal	Richmond city	0.29106	0.27832	0.28038	0.28679
VOC	Industrial Fuel Consumption, Distillate	Richmond city	0.00312	0.00311	0.00323	0.00357
VOC	Industrial Fuel Consumption, LP Gas	Richmond city	0.00157	0.00155	0.00168	0.00185
VOC	Industrial Fuel Consumption, Nat Gas	Richmond city	0.02087	0.02249	0.02451	0.02645
VOC	Industrial Fuel Consumption, Residual	Richmond city	0.00105	0.00106	0.00106	0.00116
VOC	Industrial Fuel Consumption, Wood	Richmond city	0.05760	0.06102	0.06786	0.07715
VOC	Residential Fuel Consumption, Coal	Richmond city	0.00102	0.00104	0.00100	0.00096
VOC	Residential Fuel Consumption, Distillate	Richmond city	0.00174	0.00173	0.00163	0.00143
VOC	Residential Fuel Consumption, LP Gas	Richmond city	0.00072	0.00071	0.00078	0.00084
VOC	Residential Fuel Consumption, Nat Gas	Richmond city	0.00571	0.00617	0.00705	0.00774
VOC	Residential Fuel Consumption, Wood	Richmond city	0.00000	0.00000	0.00000	0.00000
TOTAL			0.40855	0.40314	0.41835	0.44001
VOC	Forest Wildfires	Richmond city	0.00000	0.00000	0.00000	0.00000
VOC	Leaking U.S.T.	Richmond city	0.00010	0.00010	0.00010	0.00010
VOC	Prescribed Burning	Richmond city	0.00000	0.00000	0.00000	0.00000
VOC	Structural Fires	Richmond city	0.01184	0.01344	0.01545	0.01623
TOTAL			0.01194	0.01354	0.01556	0.01634
VOC	Aviation Emissions, Air Taxi	Richmond city	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, Commercial	Richmond city	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, General Aviation	Richmond city	0.00000	0.00000	0.00000	0.00000
VOC	Aviation Emissions, Military	Richmond city	0.00000	0.00000	0.00000	0.00000
VOC	Commercial Marine Vessels	Richmond city	0.01182	0.01217	0.01310	0.01425
VOC	Locomotive	Richmond city	0.04644	0.04021	0.03375	0.02924
VOC	Military Marine Vessels	Richmond city	0.00000	0.00000	0.00000	0.00000
TOTAL			0.05826	0.05238	0.04684	0.04349
VOC	Off-Road, Modeled, 2-Stroke	Richmond city	1.22802	0.79222	0.47837	0.53674
VOC	Off-Road, Modeled, 4-Stroke	Richmond city	2.03812	1.99302	1.70914	1.85143
VOC	Off-Road, Modeled, CNG	Richmond city	0.00342	0.00316	0.00243	0.00159
VOC	Off-Road, Modeled, Diesel	Richmond city	0.08876	0.08158	0.06230	0.04313
VOC	Off-Road, Modeled, LPG	Richmond city	0.21697	0.19853	0.08330	0.02162
VOC	Off-Road, Modeled, Marine, 2-Stroke	Richmond city	0.13419	0.12064	0.09308	0.07839
VOC	Off-Road, Modeled, Marine, 4-Stroke	Richmond city	0.00646	0.00656	0.00664	0.00677
VOC	Off-Road, Modeled, Marine, Diesel	Richmond city	0.00009	0.00010	0.00010	0.00010
VOC	Railroads	Richmond city	0.00322	0.00307	0.00257	0.00200
TOTAL			3.71925	3.19888	2.43793	2.54176

Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

	Category	Locality	2002	2005	2011	2018
CO	Landfills	Charles City County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
CO	On-Site Incineration	Charles City County	0.01065	0.01164	0.01396	0.01635
CO	Open Burning	Charles City County	0.23014	0.25102	0.29965	0.34517
	TOTAL		0.24079	0.26267	0.31361	0.36152
CO	Commercial Fuel Consumption, Coal	Charles City County	0.00028	0.00030	0.00030	0.00029
CO	Commercial Fuel Consumption, Distillate	Charles City County	0.00021	0.00025	0.00028	0.00031
CO	Commercial Fuel Consumption, LP Gas	Charles City County	0.00001	0.00002	0.00002	0.00002
CO	Commercial Fuel Consumption, Nat Gas	Charles City County	0.00045	0.00047	0.00056	0.00064
CO	Commercial Fuel Consumption, Residual	Charles City County	0.00002	0.00003	0.00003	0.00003
CO	Commercial Fuel Consumption, Wood	Charles City County	0.00002	0.00002	0.00002	0.00002
CO	Industrial Fuel Consumption, Coal	Charles City County	0.07522	0.07193	0.07246	0.07412
CO	Industrial Fuel Consumption, Distillate	Charles City County	0.00160	0.00159	0.00166	0.00183
CO	Industrial Fuel Consumption, LP Gas	Charles City County	0.00021	0.00020	0.00022	0.00024
CO	Industrial Fuel Consumption, Nat Gas	Charles City County	0.00538	0.00580	0.00632	0.00683
CO	Industrial Fuel Consumption, Residual	Charles City County	0.00038	0.00039	0.00039	0.00042
CO	Industrial Fuel Consumption, Wood	Charles City County	0.05202	0.05510	0.06128	0.06967
CO	Residential Fuel Consumption, Coal	Charles City County	0.00101	0.00103	0.00099	0.00094
CO	Residential Fuel Consumption, Distillate	Charles City County	0.00044	0.00044	0.00041	0.00036
CO	Residential Fuel Consumption, LP Gas	Charles City County	0.00010	0.00010	0.00011	0.00012
CO	Residential Fuel Consumption, Nat Gas	Charles City County	0.00113	0.00122	0.00139	0.00153
CO	Residential Fuel Consumption, Wood	Charles City County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.13848	0.13889	0.14643	0.15738
CO	Forest Wildfires	Charles City County	1.08701	1.08701	1.08701	1.08701
CO	Prescribed Burning	Charles City County	0.00000	0.00000	0.00000	0.00000
CO	Structural Fires	Charles City County	0.00000	0.00000	0.00000	0.00000
	TOTAL		1.08701	1.08701	1.08701	1.08701
CO	Aviation Emissions, Air Taxi	Charles City County	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, Commercial	Charles City County	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, General Aviation	Charles City County	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, Military	Charles City County	0.00000	0.00000	0.00000	0.00000
CO	Commercial Marine Vessels	Charles City County	0.09024	0.09283	0.09987	0.10805
CO	Locomotive	Charles City County	0.02717	0.02353	0.01975	0.01711
CO	Military Marine Vessels	Charles City County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.11741	0.11636	0.11961	0.12515
CO	Off-Road, Modeled, 2-Stroke	Charles City County	0.09216	0.08274	0.08000	0.09117
CO	Off-Road, Modeled, 4-Stroke	Charles City County	1.53898	1.65808	1.84507	2.06317
CO	Off-Road, Modeled, CNG	Charles City County	0.00856	0.00796	0.00361	0.00167
CO	Off-Road, Modeled, Diesel	Charles City County	0.14580	0.12980	0.10619	0.06005

Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
CO	Off-Road, Modeled, LPG	Charles City County	0.06489	0.06899	0.04112	0.01377
CO	Off-Road, Modeled, Marine, 2-Stroke	Charles City County	1.82837	1.72380	1.51554	1.42396
CO	Off-Road, Modeled, Marine, 4-Stroke	Charles City County	0.45597	0.43956	0.39566	0.34876
CO	Off-Road, Modeled, Marine, Diesel	Charles City County	0.00386	0.00416	0.00477	0.00546
CO	Railroads	Charles City County	0.00395	0.00411	0.00422	0.00413
	TOTAL		4.14254	4.11919	3.99615	4.01214
CO	Landfills	Chesterfield County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
CO	On-Site Incineration	Chesterfield County	0.36116	0.39403	0.47054	0.54786
CO	Open Burning	Chesterfield County	2.52384	2.75290	3.28621	3.78532
	TOTAL		2.88500	3.14693	3.75675	4.33317
CO	Commercial Fuel Consumption, Coal	Chesterfield County	0.03145	0.03348	0.03303	0.03290
CO	Commercial Fuel Consumption, Distillate	Chesterfield County	0.02401	0.02812	0.03179	0.03513
CO	Commercial Fuel Consumption, LP Gas	Chesterfield County	0.00162	0.00173	0.00173	0.00179
CO	Commercial Fuel Consumption, Nat Gas	Chesterfield County	0.05038	0.05235	0.06255	0.07132
CO	Commercial Fuel Consumption, Residual	Chesterfield County	0.00229	0.00350	0.00365	0.00379
CO	Commercial Fuel Consumption, Wood	Chesterfield County	0.00222	0.00222	0.00222	0.00222
CO	Industrial Fuel Consumption, Coal	Chesterfield County	2.63557	2.52016	2.53881	2.59685
CO	Industrial Fuel Consumption, Distillate	Chesterfield County	0.05601	0.05584	0.05801	0.06421
CO	Industrial Fuel Consumption, LP Gas	Chesterfield County	0.00722	0.00715	0.00773	0.00852
CO	Industrial Fuel Consumption, Nat Gas	Chesterfield County	0.18864	0.20328	0.22157	0.23913
CO	Industrial Fuel Consumption, Residual	Chesterfield County	0.01342	0.01364	0.01366	0.01485
CO	Industrial Fuel Consumption, Wood	Chesterfield County	1.82243	1.93066	2.14702	2.44091
CO	Residential Fuel Consumption, Coal	Chesterfield County	0.03867	0.03943	0.03786	0.03624
CO	Residential Fuel Consumption, Distillate	Chesterfield County	0.01679	0.01673	0.01574	0.01384
CO	Residential Fuel Consumption, LP Gas	Chesterfield County	0.00377	0.00372	0.00408	0.00443
CO	Residential Fuel Consumption, Nat Gas	Chesterfield County	0.04339	0.04692	0.05355	0.05886
CO	Residential Fuel Consumption, Wood	Chesterfield County	0.00000	0.00000	0.00000	0.00000
	TOTAL		4.93789	4.95890	5.23299	5.62500
CO	Forest Wildfires	Chesterfield County	0.31830	0.31830	0.31830	0.31830
CO	Prescribed Burning	Chesterfield County	0.00876	0.00876	0.00876	0.00876
CO	Structural Fires	Chesterfield County	0.14303	0.16243	0.18674	0.19616
	TOTAL		0.47009	0.48949	0.51380	0.52322
CO	Aviation Emissions, Air Taxi	Chesterfield County	0.00963	0.01063	0.01310	0.01556
CO	Aviation Emissions, Commercial	Chesterfield County	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, General Aviation	Chesterfield County	0.61716	0.68094	0.83974	0.99699
CO	Aviation Emissions, Military	Chesterfield County	0.00000	0.00000	0.00000	0.00000
CO	Commercial Marine Vessels	Chesterfield County	0.02252	0.02317	0.02492	0.02696
CO	Locomotive	Chesterfield County	0.07500	0.06494	0.05450	0.04722

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
CO	Military Marine Vessels	Chesterfield County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.72431	0.77968	0.93226	1.08673
CO	Off-Road, Modeled, 2-Stroke	Chesterfield County	3.19794	2.90593	2.88192	3.16935
CO	Off-Road, Modeled, 4-Stroke	Chesterfield County	52.09634	56.45587	63.29645	71.03627
CO	Off-Road, Modeled, CNG	Chesterfield County	0.25814	0.26341	0.12635	0.05968
CO	Off-Road, Modeled, Diesel	Chesterfield County	1.92187	1.73023	1.50719	0.82418
CO	Off-Road, Modeled, LPG	Chesterfield County	2.28202	2.42658	1.44762	0.48715
CO	Off-Road, Modeled, Marine, 2-Stroke	Chesterfield County	1.07743	1.01581	0.89308	0.83912
CO	Off-Road, Modeled, Marine, 4-Stroke	Chesterfield County	0.25078	0.24176	0.21761	0.19182
CO	Off-Road, Modeled, Marine, Diesel	Chesterfield County	0.00213	0.00229	0.00263	0.00301
CO	Railroads	Chesterfield County	0.00666	0.00692	0.00710	0.00696
	TOTAL		61.09332	65.04881	70.37996	76.61753
CO	Landfills	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
CO	On-Site Incineration	Colonial Heights city	0.02191	0.02389	0.02849	0.03311
CO	Open Burning	Colonial Heights city	0.00767	0.00837	0.00999	0.01151
	TOTAL		0.02958	0.03226	0.03848	0.04461
CO	Commercial Fuel Consumption, Coal	Colonial Heights city	0.00330	0.00351	0.00347	0.00345
CO	Commercial Fuel Consumption, Distillate	Colonial Heights city	0.00252	0.00295	0.00333	0.00369
CO	Commercial Fuel Consumption, LP Gas	Colonial Heights city	0.00017	0.00018	0.00018	0.00019
CO	Commercial Fuel Consumption, Nat Gas	Colonial Heights city	0.00529	0.00549	0.00656	0.00748
CO	Commercial Fuel Consumption, Residual	Colonial Heights city	0.00024	0.00037	0.00038	0.00040
CO	Commercial Fuel Consumption, Wood	Colonial Heights city	0.00023	0.00023	0.00023	0.00023
CO	Industrial Fuel Consumption, Coal	Colonial Heights city	0.09813	0.09384	0.09453	0.09669
CO	Industrial Fuel Consumption, Distillate	Colonial Heights city	0.00209	0.00208	0.00216	0.00239
CO	Industrial Fuel Consumption, LP Gas	Colonial Heights city	0.00027	0.00027	0.00029	0.00032
CO	Industrial Fuel Consumption, Nat Gas	Colonial Heights city	0.00702	0.00757	0.00825	0.00890
CO	Industrial Fuel Consumption, Residual	Colonial Heights city	0.00050	0.00051	0.00051	0.00055
CO	Industrial Fuel Consumption, Wood	Colonial Heights city	0.06786	0.07189	0.07994	0.09089
CO	Residential Fuel Consumption, Coal	Colonial Heights city	0.00243	0.00248	0.00238	0.00228
CO	Residential Fuel Consumption, Distillate	Colonial Heights city	0.00106	0.00105	0.00099	0.00087
CO	Residential Fuel Consumption, LP Gas	Colonial Heights city	0.00024	0.00023	0.00026	0.00028
CO	Residential Fuel Consumption, Nat Gas	Colonial Heights city	0.00273	0.00295	0.00337	0.00370
CO	Residential Fuel Consumption, Wood	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.19407	0.19559	0.20683	0.22231
CO	Forest Wildfires	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
CO	Prescribed Burning	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
CO	Structural Fires	Colonial Heights city	0.00397	0.00451	0.00518	0.00544
	TOTAL		0.00397	0.00451	0.00518	0.00544

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Category		Locality	2002	2005	2011	2018
CO	Aviation Emissions, Air Taxi	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, Commercial	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, General Aviation	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, Military	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
CO	Commercial Marine Vessels	Colonial Heights city	0.02128	0.02189	0.02355	0.02548
CO	Locomotive	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
CO	Military Marine Vessels	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.02128	0.02189	0.02355	0.02548
CO	Off-Road, Modeled, 2-Stroke	Colonial Heights city	0.12694	0.10836	0.09979	0.11213
CO	Off-Road, Modeled, 4-Stroke	Colonial Heights city	2.32765	2.50307	2.78890	3.12543
CO	Off-Road, Modeled, CNG	Colonial Heights city	0.01925	0.01990	0.01082	0.00403
CO	Off-Road, Modeled, Diesel	Colonial Heights city	0.01745	0.01664	0.01644	0.00807
CO	Off-Road, Modeled, LPG	Colonial Heights city	0.22279	0.23631	0.13819	0.04311
CO	Off-Road, Modeled, Marine, 2-Stroke	Colonial Heights city	0.03265	0.03078	0.02706	0.02543
CO	Off-Road, Modeled, Marine, 4-Stroke	Colonial Heights city	0.00760	0.00733	0.00659	0.00581
CO	Off-Road, Modeled, Marine, Diesel	Colonial Heights city	0.00006	0.00007	0.00008	0.00009
CO	Railroads	Colonial Heights city	0.00107	0.00111	0.00114	0.00112
	TOTAL		2.75546	2.92357	3.08901	3.32521
CO	Landfills	Hanover County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
CO	On-Site Incineration	Hanover County	0.13534	0.14785	0.17713	0.20728
CO	Open Burning	Hanover County	1.34247	1.46431	1.74799	2.01347
	TOTAL		1.47781	1.61216	1.92512	2.22075
CO	Commercial Fuel Consumption, Coal	Hanover County	0.01084	0.01154	0.01139	0.01134
CO	Commercial Fuel Consumption, Distillate	Hanover County	0.00828	0.00969	0.01096	0.01211
CO	Commercial Fuel Consumption, LP Gas	Hanover County	0.00056	0.00059	0.00060	0.00062
CO	Commercial Fuel Consumption, Nat Gas	Hanover County	0.01737	0.01804	0.02156	0.02458
CO	Commercial Fuel Consumption, Residual	Hanover County	0.00079	0.00121	0.00126	0.00131
CO	Commercial Fuel Consumption, Wood	Hanover County	0.00077	0.00077	0.00077	0.00077
CO	Industrial Fuel Consumption, Coal	Hanover County	0.95902	0.91702	0.92381	0.94493
CO	Industrial Fuel Consumption, Distillate	Hanover County	0.02038	0.02032	0.02111	0.02336
CO	Industrial Fuel Consumption, LP Gas	Hanover County	0.00263	0.00260	0.00281	0.00310
CO	Industrial Fuel Consumption, Nat Gas	Hanover County	0.06864	0.07397	0.08063	0.08702
CO	Industrial Fuel Consumption, Residual	Hanover County	0.00488	0.00496	0.00497	0.00540
CO	Industrial Fuel Consumption, Wood	Hanover County	0.66314	0.70252	0.78125	0.88819
CO	Residential Fuel Consumption, Coal	Hanover County	0.01309	0.01334	0.01281	0.01226
CO	Residential Fuel Consumption, Distillate	Hanover County	0.00568	0.00566	0.00532	0.00468
CO	Residential Fuel Consumption, LP Gas	Hanover County	0.00128	0.00126	0.00138	0.00150
CO	Residential Fuel Consumption, Nat Gas	Hanover County	0.01468	0.01588	0.01812	0.01992

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
CO	Residential Fuel Consumption, Wood	Hanover County	0.00000	0.00000	0.00000	0.00000
	TOTAL		1.79201	1.79938	1.89874	2.04109
CO	Forest Wildfires	Hanover County	0.09474	0.09474	0.09474	0.09474
CO	Prescribed Burning	Hanover County	0.54740	0.54740	0.54740	0.54740
CO	Structural Fires	Hanover County	0.04792	0.05442	0.06257	0.06572
	TOTAL		0.69006	0.69656	0.70470	0.70786
CO	Aviation Emissions, Air Taxi	Hanover County	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, Commercial	Hanover County	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, General Aviation	Hanover County	0.49085	0.54158	0.66787	0.79295
CO	Aviation Emissions, Military	Hanover County	0.00000	0.00000	0.00000	0.00000
CO	Commercial Marine Vessels	Hanover County	0.00000	0.00000	0.00000	0.00000
CO	Locomotive	Hanover County	0.04239	0.03671	0.03081	0.02669
CO	Military Marine Vessels	Hanover County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.53324	0.57829	0.69868	0.81964
CO	Off-Road, Modeled, 2-Stroke	Hanover County	4.62298	4.10738	4.02670	4.48792
CO	Off-Road, Modeled, 4-Stroke	Hanover County	63.64945	69.07588	76.95842	86.48551
CO	Off-Road, Modeled, CNG	Hanover County	0.12056	0.11987	0.05137	0.02888
CO	Off-Road, Modeled, Diesel	Hanover County	1.00957	0.92001	0.79161	0.47234
CO	Off-Road, Modeled, LPG	Hanover County	0.84170	0.89644	0.54141	0.19438
CO	Off-Road, Modeled, Marine, 2-Stroke	Hanover County	0.09795	0.09235	0.08119	0.07628
CO	Off-Road, Modeled, Marine, 4-Stroke	Hanover County	0.02280	0.02198	0.01978	0.01744
CO	Off-Road, Modeled, Marine, Diesel	Hanover County	0.00019	0.00021	0.00024	0.00027
CO	Railroads	Hanover County	0.02313	0.02404	0.02467	0.02416
	TOTAL		70.38834	75.25816	82.49540	91.78718
CO	Landfills	Henrico County	0.14614	0.15174	0.16622	0.19222
	TOTAL		0.14614	0.15174	0.16622	0.19222
CO	On-Site Incineration	Henrico County	0.40552	0.44307	0.53098	0.62167
CO	Open Burning	Henrico County	0.45452	0.49577	0.59182	0.68170
	TOTAL		0.86004	0.93884	1.12280	1.30337
CO	Commercial Fuel Consumption, Coal	Henrico County	0.05377	0.05724	0.05647	0.05625
CO	Commercial Fuel Consumption, Distillate	Henrico County	0.04104	0.04807	0.05434	0.06006
CO	Commercial Fuel Consumption, LP Gas	Henrico County	0.00277	0.00295	0.00296	0.00307
CO	Commercial Fuel Consumption, Nat Gas	Henrico County	0.08614	0.08949	0.10694	0.12192
CO	Commercial Fuel Consumption, Residual	Henrico County	0.00391	0.00598	0.00624	0.00648
CO	Commercial Fuel Consumption, Wood	Henrico County	0.00380	0.00380	0.00380	0.00380
CO	Industrial Fuel Consumption, Coal	Henrico County	2.78788	2.66580	2.68553	2.74693
CO	Industrial Fuel Consumption, Distillate	Henrico County	0.05924	0.05906	0.06136	0.06792
CO	Industrial Fuel Consumption, LP Gas	Henrico County	0.00764	0.00756	0.00818	0.00901

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
CO	Industrial Fuel Consumption, Nat Gas	Henrico County	0.19954	0.21502	0.23438	0.25295
CO	Industrial Fuel Consumption, Residual	Henrico County	0.01420	0.01443	0.01444	0.01571
CO	Industrial Fuel Consumption, Wood	Henrico County	1.92775	2.04224	2.27109	2.58197
CO	Residential Fuel Consumption, Coal	Henrico County	0.03878	0.03954	0.03797	0.03634
CO	Residential Fuel Consumption, Distillate	Henrico County	0.01684	0.01678	0.01578	0.01389
CO	Residential Fuel Consumption, LP Gas	Henrico County	0.00378	0.00373	0.00409	0.00444
CO	Residential Fuel Consumption, Nat Gas	Henrico County	0.04352	0.04706	0.05371	0.05903
CO	Residential Fuel Consumption, Wood	Henrico County	0.00000	0.00000	0.00000	0.00000
	TOTAL		5.29061	5.31875	5.61729	6.03978
CO	Forest Wildfires	Henrico County	0.22090	0.22090	0.22090	0.22090
CO	Prescribed Burning	Henrico County	0.00000	0.00000	0.00000	0.00000
CO	Structural Fires	Henrico County	0.04424	0.05024	0.05776	0.06067
	TOTAL		0.26514	0.27114	0.27866	0.28157
CO	Aviation Emissions, Air Taxi	Henrico County	0.78677	0.86808	1.07052	1.27099
CO	Aviation Emissions, Commercial	Henrico County	0.49727	0.54866	0.67661	0.80332
CO	Aviation Emissions, General Aviation	Henrico County	0.38231	0.42182	0.52019	0.61761
CO	Aviation Emissions, Military	Henrico County	0.12924	0.14571	0.15779	0.17995
CO	Commercial Marine Vessels	Henrico County	0.02376	0.02444	0.02629	0.02845
CO	Locomotive	Henrico County	0.07609	0.06588	0.05529	0.04790
CO	Military Marine Vessels	Henrico County	0.00000	0.00000	0.00000	0.00000
	TOTAL		1.89543	2.07460	2.50669	2.94822
CO	Off-Road, Modeled, 2-Stroke	Henrico County	2.68889	2.30707	2.13097	2.35483
CO	Off-Road, Modeled, 4-Stroke	Henrico County	49.89291	53.92935	60.46727	67.95110
CO	Off-Road, Modeled, CNG	Henrico County	0.27459	0.27939	0.13081	0.06448
CO	Off-Road, Modeled, Diesel	Henrico County	3.20368	2.87259	2.48157	1.35201
CO	Off-Road, Modeled, LPG	Henrico County	2.31207	2.46009	1.47542	0.50631
CO	Off-Road, Modeled, Marine, 2-Stroke	Henrico County	0.42444	0.40017	0.35182	0.33056
CO	Off-Road, Modeled, Marine, 4-Stroke	Henrico County	0.09879	0.09524	0.08573	0.07556
CO	Off-Road, Modeled, Marine, Diesel	Henrico County	0.00084	0.00090	0.00103	0.00118
CO	Railroads	Henrico County	0.03052	0.03172	0.03255	0.03187
	TOTAL		58.92673	62.37651	67.15717	72.66791
CO	Landfills	Hopewell city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
CO	On-Site Incineration	Hopewell city	0.03966	0.04342	0.05229	0.06169
CO	Open Burning	Hopewell city	0.00192	0.00209	0.00250	0.00288
	TOTAL		0.04158	0.04551	0.05479	0.06456
CO	Commercial Fuel Consumption, Coal	Hopewell city	0.00198	0.00211	0.00208	0.00208
CO	Commercial Fuel Consumption, Distillate	Hopewell city	0.00151	0.00177	0.00201	0.00222

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
CO	Commercial Fuel Consumption, LP Gas	Hopewell city	0.00010	0.00011	0.00011	0.00011
CO	Commercial Fuel Consumption, Nat Gas	Hopewell city	0.00318	0.00330	0.00395	0.00450
CO	Commercial Fuel Consumption, Residual	Hopewell city	0.00014	0.00022	0.00023	0.00024
CO	Commercial Fuel Consumption, Wood	Hopewell city	0.00014	0.00014	0.00014	0.00014
CO	Industrial Fuel Consumption, Coal	Hopewell city	0.51037	0.48802	0.49163	0.50287
CO	Industrial Fuel Consumption, Distillate	Hopewell city	0.01085	0.01081	0.01123	0.01243
CO	Industrial Fuel Consumption, LP Gas	Hopewell city	0.00140	0.00138	0.00150	0.00165
CO	Industrial Fuel Consumption, Nat Gas	Hopewell city	0.03653	0.03936	0.04291	0.04631
CO	Industrial Fuel Consumption, Residual	Hopewell city	0.00260	0.00264	0.00264	0.00288
CO	Industrial Fuel Consumption, Wood	Hopewell city	0.35291	0.37386	0.41576	0.47267
CO	Residential Fuel Consumption, Coal	Hopewell city	0.00316	0.00323	0.00310	0.00297
CO	Residential Fuel Consumption, Distillate	Hopewell city	0.00137	0.00137	0.00129	0.00113
CO	Residential Fuel Consumption, LP Gas	Hopewell city	0.00031	0.00030	0.00033	0.00036
CO	Residential Fuel Consumption, Nat Gas	Hopewell city	0.00355	0.00384	0.00438	0.00482
CO	Residential Fuel Consumption, Wood	Hopewell city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.93011	0.93248	0.98329	1.05737
CO	Forest Wildfires	Hopewell city	0.00000	0.00000	0.00000	0.00000
CO	Prescribed Burning	Hopewell city	0.00000	0.00000	0.00000	0.00000
CO	Structural Fires	Hopewell city	0.00737	0.00837	0.00963	0.01011
	TOTAL		0.00737	0.00837	0.00963	0.01011
CO	Aviation Emissions, Air Taxi	Hopewell city	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, Commercial	Hopewell city	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, General Aviation	Hopewell city	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, Military	Hopewell city	0.00000	0.00000	0.00000	0.00000
CO	Commercial Marine Vessels	Hopewell city	0.01900	0.01955	0.02103	0.02275
CO	Locomotive	Hopewell city	0.05000	0.04329	0.03633	0.03148
CO	Military Marine Vessels	Hopewell city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.06900	0.06284	0.05736	0.05423
CO	Off-Road, Modeled, 2-Stroke	Hopewell city	0.31299	0.26938	0.25296	0.28428
CO	Off-Road, Modeled, 4-Stroke	Hopewell city	5.01207	5.39394	5.97197	6.68231
CO	Off-Road, Modeled, CNG	Hopewell city	0.03456	0.03577	0.01966	0.00717
CO	Off-Road, Modeled, Diesel	Hopewell city	0.03216	0.03082	0.03021	0.01542
CO	Off-Road, Modeled, LPG	Hopewell city	0.41134	0.43615	0.25454	0.07901
CO	Off-Road, Modeled, Marine, 2-Stroke	Hopewell city	0.03265	0.03078	0.02706	0.02543
CO	Off-Road, Modeled, Marine, 4-Stroke	Hopewell city	0.00760	0.00733	0.00659	0.00581
CO	Off-Road, Modeled, Marine, Diesel	Hopewell city	0.00006	0.00007	0.00008	0.00009
CO	Railroads	Hopewell city	0.00030	0.00031	0.00032	0.00031
	TOTAL		5.84374	6.20455	6.56339	7.09983
CO	Landfills	Petersburg city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000

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Category		Locality	Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled			
			2002	2005	2011	2018
CO	On-Site Incineration	Petersburg city	0.05408	0.05916	0.07109	0.08360
CO	Open Burning	Petersburg city	0.04795	0.05230	0.01249	0.01438
	TOTAL		0.10203	0.11146	0.08358	0.09798
CO	Commercial Fuel Consumption, Coal	Petersburg city	0.00481	0.00512	0.00505	0.00503
CO	Commercial Fuel Consumption, Distillate	Petersburg city	0.00367	0.00430	0.00486	0.00537
CO	Commercial Fuel Consumption, LP Gas	Petersburg city	0.00025	0.00026	0.00026	0.00027
CO	Commercial Fuel Consumption, Nat Gas	Petersburg city	0.00771	0.00801	0.00957	0.01091
CO	Commercial Fuel Consumption, Residual	Petersburg city	0.00035	0.00054	0.00056	0.00058
CO	Commercial Fuel Consumption, Wood	Petersburg city	0.00034	0.00034	0.00034	0.00034
CO	Industrial Fuel Consumption, Coal	Petersburg city	0.44783	0.42822	0.43139	0.44125
CO	Industrial Fuel Consumption, Distillate	Petersburg city	0.00952	0.00949	0.00986	0.01091
CO	Industrial Fuel Consumption, LP Gas	Petersburg city	0.00123	0.00122	0.00131	0.00145
CO	Industrial Fuel Consumption, Nat Gas	Petersburg city	0.03205	0.03454	0.03765	0.04063
CO	Industrial Fuel Consumption, Residual	Petersburg city	0.00228	0.00232	0.00232	0.00252
CO	Industrial Fuel Consumption, Wood	Petersburg city	0.30966	0.32805	0.36482	0.41476
CO	Residential Fuel Consumption, Coal	Petersburg city	0.00468	0.00478	0.00459	0.00439
CO	Residential Fuel Consumption, Distillate	Petersburg city	0.00203	0.00203	0.00191	0.00168
CO	Residential Fuel Consumption, LP Gas	Petersburg city	0.00046	0.00045	0.00049	0.00054
CO	Residential Fuel Consumption, Nat Gas	Petersburg city	0.00526	0.00568	0.00649	0.00713
CO	Residential Fuel Consumption, Wood	Petersburg city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.83214	0.83534	0.88147	0.94777
CO	Forest Wildfires	Petersburg city	0.00000	0.00000	0.00000	0.00000
CO	Prescribed Burning	Petersburg city	0.00000	0.00000	0.00000	0.00000
CO	Structural Fires	Petersburg city	0.01276	0.01449	0.01666	0.01750
	TOTAL		0.01276	0.01449	0.01666	0.01750
CO	Aviation Emissions, Air Taxi	Petersburg city	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, Commercial	Petersburg city	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, General Aviation	Petersburg city	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, Military	Petersburg city	0.00035	0.00040	0.00043	0.00049
CO	Commercial Marine Vessels	Petersburg city	0.05319	0.05473	0.05887	0.06369
CO	Locomotive	Petersburg city	0.06848	0.05929	0.04976	0.04311
CO	Military Marine Vessels	Petersburg city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.12202	0.11441	0.10906	0.10730
CO	Off-Road, Modeled, 2-Stroke	Petersburg city	0.14281	0.11856	0.10392	0.11684
CO	Off-Road, Modeled, 4-Stroke	Petersburg city	3.78952	4.06101	4.55205	5.10996
CO	Off-Road, Modeled, CNG	Petersburg city	0.04861	0.05023	0.02715	0.01024
CO	Off-Road, Modeled, Diesel	Petersburg city	0.03692	0.03514	0.03486	0.01573
CO	Off-Road, Modeled, LPG	Petersburg city	0.55187	0.58554	0.34297	0.10733
CO	Off-Road, Modeled, Marine, 2-Stroke	Petersburg city	0.03781	0.03565	0.03134	0.02945

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
CO	Off-Road, Modeled, Marine, 4-Stroke	Petersburg city	0.00874	0.00842	0.00758	0.00668
CO	Off-Road, Modeled, Marine, Diesel	Petersburg city	0.00006	0.00007	0.00008	0.00009
CO	Railroads	Petersburg city	0.01301	0.01356	0.01399	0.01382
	TOTAL		4.62936	4.90818	5.11392	5.41015
CO	Landfills	Prince George County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
CO	On-Site Incineration	Prince George County	0.04447	0.04850	0.05786	0.06728
CO	Open Burning	Prince George County	4.08493	4.45568	1.06377	1.22534
	TOTAL		4.12940	4.50418	1.12164	1.29262
CO	Commercial Fuel Consumption, Coal	Prince George County	0.00380	0.00404	0.00399	0.00397
CO	Commercial Fuel Consumption, Distillate	Prince George County	0.00290	0.00340	0.00384	0.00424
CO	Commercial Fuel Consumption, LP Gas	Prince George County	0.00020	0.00021	0.00021	0.00022
CO	Commercial Fuel Consumption, Nat Gas	Prince George County	0.00609	0.00632	0.00756	0.00861
CO	Commercial Fuel Consumption, Residual	Prince George County	0.00028	0.00042	0.00044	0.00046
CO	Commercial Fuel Consumption, Wood	Prince George County	0.00027	0.00027	0.00027	0.00027
CO	Industrial Fuel Consumption, Coal	Prince George County	0.20671	0.19766	0.19913	0.20368
CO	Industrial Fuel Consumption, Distillate	Prince George County	0.00439	0.00438	0.00455	0.00504
CO	Industrial Fuel Consumption, LP Gas	Prince George County	0.00057	0.00056	0.00061	0.00067
CO	Industrial Fuel Consumption, Nat Gas	Prince George County	0.01480	0.01594	0.01738	0.01876
CO	Industrial Fuel Consumption, Residual	Prince George County	0.00105	0.00107	0.00107	0.00116
CO	Industrial Fuel Consumption, Wood	Prince George County	0.14294	0.15143	0.16840	0.19145
CO	Residential Fuel Consumption, Coal	Prince George County	0.00489	0.00498	0.00479	0.00458
CO	Residential Fuel Consumption, Distillate	Prince George County	0.00212	0.00211	0.00199	0.00175
CO	Residential Fuel Consumption, LP Gas	Prince George County	0.00048	0.00047	0.00052	0.00056
CO	Residential Fuel Consumption, Nat Gas	Prince George County	0.00549	0.00593	0.00677	0.00744
CO	Residential Fuel Consumption, Wood	Prince George County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.39696	0.39921	0.42149	0.45286
CO	Forest Wildfires	Prince George County	0.16192	0.16192	0.16192	0.16192
CO	Prescribed Burning	Prince George County	0.12919	0.12919	0.12919	0.12919
CO	Structural Fires	Prince George County	0.00841	0.00955	0.01098	0.01154
	TOTAL		0.29952	0.30066	0.30209	0.30264
CO	Aviation Emissions, Air Taxi	Prince George County	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, Commercial	Prince George County	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, General Aviation	Prince George County	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, Military	Prince George County	0.00000	0.00000	0.00000	0.00000
CO	Commercial Marine Vessels	Prince George County	0.08815	0.09068	0.09755	0.10554
CO	Locomotive	Prince George County	0.08587	0.07435	0.06240	0.05406
CO	Military Marine Vessels	Prince George County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.17401	0.16503	0.15995	0.15961

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Category		Locality	2002	2005	2011	2018
CO	Off-Road, Modeled, 2-Stroke	Prince George County	0.51863	0.57505	0.66965	0.71567
CO	Off-Road, Modeled, 4-Stroke	Prince George County	4.66877	5.11475	5.81683	6.45245
CO	Off-Road, Modeled, CNG	Prince George County	0.02552	0.02525	0.01260	0.00527
CO	Off-Road, Modeled, Diesel	Prince George County	0.31251	0.27808	0.23340	0.12716
CO	Off-Road, Modeled, LPG	Prince George County	0.24519	0.26029	0.15393	0.05019
CO	Off-Road, Modeled, Marine, 2-Stroke	Prince George County	1.58805	1.49722	1.31633	1.23679
CO	Off-Road, Modeled, Marine, 4-Stroke	Prince George County	0.36696	0.35375	0.31842	0.28067
CO	Off-Road, Modeled, Marine, Diesel	Prince George County	0.00271	0.00292	0.00334	0.00383
CO	Railroads	Prince George County	0.01148	0.01197	0.01235	0.01220
TOTAL			7.73981	8.11928	8.53685	8.88423
CO	Landfills	Richmond city	0.00000	0.00000	0.00000	0.00000
TOTAL			0.00000	0.00000	0.00000	0.00000
CO	On-Site Incineration	Richmond city	0.30063	0.32856	0.39405	0.46188
CO	Open Burning	Richmond city	0.00959	0.01046	0.01249	0.01438
TOTAL			0.31022	0.33902	0.40653	0.47627
CO	Commercial Fuel Consumption, Coal	Richmond city	0.04882	0.05197	0.05128	0.05108
CO	Commercial Fuel Consumption, Distillate	Richmond city	0.03727	0.04365	0.04934	0.05454
CO	Commercial Fuel Consumption, LP Gas	Richmond city	0.00252	0.00268	0.00269	0.00279
CO	Commercial Fuel Consumption, Nat Gas	Richmond city	0.07822	0.08126	0.09711	0.11071
CO	Commercial Fuel Consumption, Residual	Richmond city	0.00355	0.00543	0.00567	0.00589
CO	Commercial Fuel Consumption, Wood	Richmond city	0.00345	0.00345	0.00345	0.00345
CO	Industrial Fuel Consumption, Coal	Richmond city	3.66526	3.50476	3.53070	3.61142
CO	Industrial Fuel Consumption, Distillate	Richmond city	0.07789	0.07765	0.08068	0.08929
CO	Industrial Fuel Consumption, LP Gas	Richmond city	0.01005	0.00995	0.01075	0.01185
CO	Industrial Fuel Consumption, Nat Gas	Richmond city	0.26234	0.28269	0.30814	0.33256
CO	Industrial Fuel Consumption, Residual	Richmond city	0.01866	0.01897	0.01899	0.02065
CO	Industrial Fuel Consumption, Wood	Richmond city	2.53444	2.68495	2.98583	3.39455
CO	Residential Fuel Consumption, Coal	Richmond city	0.02803	0.02858	0.02744	0.02627
CO	Residential Fuel Consumption, Distillate	Richmond city	0.01217	0.01212	0.01141	0.01004
CO	Residential Fuel Consumption, LP Gas	Richmond city	0.00273	0.00270	0.00296	0.00321
CO	Residential Fuel Consumption, Nat Gas	Richmond city	0.03145	0.03401	0.03882	0.04267
CO	Residential Fuel Consumption, Wood	Richmond city	0.00000	0.00000	0.00000	0.00000
TOTAL			6.81685	6.84483	7.22524	7.77095
CO	Forest Wildfires	Richmond city	0.00000	0.00000	0.00000	0.00000
CO	Prescribed Burning	Richmond city	0.00000	0.00000	0.00000	0.00000
CO	Structural Fires	Richmond city	0.06456	0.07331	0.08429	0.08854
TOTAL			0.06456	0.07331	0.08429	0.08854
CO	Aviation Emissions, Air Taxi	Richmond city	0.00000	0.00000	0.00000	0.00000

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
CO	Aviation Emissions, Commercial	Richmond city	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, General Aviation	Richmond city	0.00000	0.00000	0.00000	0.00000
CO	Aviation Emissions, Military	Richmond city	0.00000	0.00000	0.00000	0.00000
CO	Commercial Marine Vessels	Richmond city	0.02376	0.02444	0.02629	0.02845
CO	Locomotive	Richmond city	0.11196	0.09694	0.08136	0.07049
CO	Military Marine Vessels	Richmond city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.13571	0.12138	0.10765	0.09893
CO	Off-Road, Modeled, 2-Stroke	Richmond city	2.30367	1.95811	1.83743	2.06860
CO	Off-Road, Modeled, 4-Stroke	Richmond city	46.60733	50.50299	56.79240	64.15443
CO	Off-Road, Modeled, CNG	Richmond city	0.35581	0.36294	0.17515	0.07897
CO	Off-Road, Modeled, Diesel	Richmond city	0.34580	0.33312	0.32111	0.18022
CO	Off-Road, Modeled, LPG	Richmond city	3.19542	3.39723	2.01551	0.66111
CO	Off-Road, Modeled, Marine, 2-Stroke	Richmond city	0.19590	0.18469	0.16238	0.15257
CO	Off-Road, Modeled, Marine, 4-Stroke	Richmond city	0.04560	0.04396	0.03957	0.03488
CO	Off-Road, Modeled, Marine, Diesel	Richmond city	0.00039	0.00042	0.00048	0.00055
CO	Railroads	Richmond city	0.03698	0.03843	0.03943	0.03861
	TOTAL		53.08689	56.82188	61.38344	67.36993
NOX	Landfills	Charles City County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
NOX	On-Site Incineration	Charles City County	0.00233	0.00255	0.00307	0.00361
NOX	Open Burning	Charles City County	0.00658	0.00717	0.00856	0.00986
	TOTAL		0.00891	0.00973	0.01164	0.01347
NOX	Commercial Fuel Consumption, Coal	Charles City County	0.00024	0.00026	0.00025	0.00025
NOX	Commercial Fuel Consumption, Distillate	Charles City County	0.00086	0.00101	0.00114	0.00126
NOX	Commercial Fuel Consumption, LP Gas	Charles City County	0.00011	0.00011	0.00011	0.00012
NOX	Commercial Fuel Consumption, Nat Gas	Charles City County	0.00214	0.00223	0.00266	0.00304
NOX	Commercial Fuel Consumption, Residual	Charles City County	0.00022	0.00034	0.00036	0.00037
NOX	Commercial Fuel Consumption, Wood	Charles City County	0.00000	0.00000	0.00000	0.00000
NOX	Industrial Fuel Consumption, Coal	Charles City County	0.07522	0.07193	0.07246	0.07412
NOX	Industrial Fuel Consumption, Distillate	Charles City County	0.00639	0.00637	0.00662	0.00733
NOX	Industrial Fuel Consumption, LP Gas	Charles City County	0.00122	0.00121	0.00131	0.00144
NOX	Industrial Fuel Consumption, Nat Gas	Charles City County	0.02154	0.02321	0.02530	0.02730
NOX	Industrial Fuel Consumption, Residual	Charles City County	0.00421	0.00428	0.00429	0.00466
NOX	Industrial Fuel Consumption, Wood	Charles City County	0.00299	0.00317	0.00353	0.00401
NOX	Residential Fuel Consumption, Coal	Charles City County	0.00003	0.00003	0.00003	0.00003
NOX	Residential Fuel Consumption, Distillate	Charles City County	0.00157	0.00157	0.00147	0.00130
NOX	Residential Fuel Consumption, LP Gas	Charles City County	0.00072	0.00071	0.00078	0.00085
NOX	Residential Fuel Consumption, Nat Gas	Charles City County	0.00265	0.00287	0.00327	0.00360
NOX	Residential Fuel Consumption, Wood	Charles City County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.12015	0.11931	0.12360	0.12968

Category		Locality	2002	2005	2011	2018
NOX	Forest Wildfires	Charles City County	0.02332	0.02332	0.02332	0.02332
NOX	Prescribed Burning	Charles City County	0.00000	0.00000	0.00000	0.00000
NOX	Structural Fires	Charles City County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.02332	0.02332	0.02332	0.02332
NOX	Aviation Emissions, Air Taxi	Charles City County	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, Commercial	Charles City County	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, General Aviation	Charles City County	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, Military	Charles City County	0.00000	0.00000	0.00000	0.00000
NOX	Commercial Marine Vessels	Charles City County	0.23745	0.24430	0.26282	0.28452
NOX	Locomotive	Charles City County	0.27212	0.23562	0.19775	0.17133
NOX	Military Marine Vessels	Charles City County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.50957	0.47992	0.46057	0.45585
NOX	Off-Road, Modeled, 2-Stroke	Charles City County	0.00043	0.00047	0.00045	0.00052
NOX	Off-Road, Modeled, 4-Stroke	Charles City County	0.01347	0.01232	0.01016	0.01043
NOX	Off-Road, Modeled, CNG	Charles City County	0.00223	0.00160	0.00076	0.00045
NOX	Off-Road, Modeled, Diesel	Charles City County	0.26453	0.25091	0.20670	0.12969
NOX	Off-Road, Modeled, LPG	Charles City County	0.01637	0.01477	0.00638	0.00252
NOX	Off-Road, Modeled, Marine, 2-Stroke	Charles City County	0.02250	0.03047	0.04624	0.05746
NOX	Off-Road, Modeled, Marine, 4-Stroke	Charles City County	0.02038	0.02206	0.02580	0.02985
NOX	Off-Road, Modeled, Marine, Diesel	Charles City County	0.02389	0.02590	0.02727	0.02839
NOX	Railroads	Charles City County	0.00136	0.00136	0.00126	0.00094
	TOTAL		0.36517	0.35987	0.32502	0.26025
NOX	Landfills	Chesterfield County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
NOX	On-Site Incineration	Chesterfield County	0.07928	0.08663	0.10386	0.12117
NOX	Open Burning	Chesterfield County	0.07211	0.07865	0.09389	0.10815
	TOTAL		0.15139	0.16529	0.19776	0.22932
NOX	Commercial Fuel Consumption, Coal	Chesterfield County	0.02716	0.02891	0.02853	0.02842
NOX	Commercial Fuel Consumption, Distillate	Chesterfield County	0.09603	0.11246	0.12714	0.14053
NOX	Commercial Fuel Consumption, LP Gas	Chesterfield County	0.01195	0.01271	0.01276	0.01323
NOX	Commercial Fuel Consumption, Nat Gas	Chesterfield County	0.23992	0.24927	0.29787	0.33960
NOX	Commercial Fuel Consumption, Residual	Chesterfield County	0.02517	0.03850	0.04015	0.04171
NOX	Commercial Fuel Consumption, Wood	Chesterfield County	0.00013	0.00013	0.00013	0.00013
NOX	Industrial Fuel Consumption, Coal	Chesterfield County	2.63557	2.52016	2.53881	2.59685
NOX	Industrial Fuel Consumption, Distillate	Chesterfield County	0.22402	0.22334	0.23205	0.25684
NOX	Industrial Fuel Consumption, LP Gas	Chesterfield County	0.04289	0.04246	0.04589	0.05058
NOX	Industrial Fuel Consumption, Nat Gas	Chesterfield County	0.75456	0.81310	0.88629	0.95654
NOX	Industrial Fuel Consumption, Residual	Chesterfield County	0.14763	0.15005	0.15021	0.16333

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
NOX	Industrial Fuel Consumption, Wood	Chesterfield County	0.10493	0.11116	0.12362	0.14054
NOX	Residential Fuel Consumption, Coal	Chesterfield County	0.00128	0.00130	0.00125	0.00120
NOX	Residential Fuel Consumption, Distillate	Chesterfield County	0.06046	0.06021	0.05665	0.04984
NOX	Residential Fuel Consumption, LP Gas	Chesterfield County	0.02779	0.02742	0.03005	0.03264
NOX	Residential Fuel Consumption, Nat Gas	Chesterfield County	0.10197	0.11027	0.12584	0.13831
NOX	Residential Fuel Consumption, Wood	Chesterfield County	0.00000	0.00000	0.00000	0.00000
	TOTAL		4.50146	4.50147	4.69723	4.95026
NOX	Forest Wildfires	Chesterfield County	0.00682	0.00682	0.00682	0.00682
NOX	Prescribed Burning	Chesterfield County	0.00095	0.00095	0.00095	0.00095
NOX	Structural Fires	Chesterfield County	0.00334	0.00379	0.00436	0.00458
	TOTAL		0.01111	0.01156	0.01213	0.01235
NOX	Aviation Emissions, Air Taxi	Chesterfield County	0.00005	0.00006	0.00007	0.00008
NOX	Aviation Emissions, Commercial	Chesterfield County	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, General Aviation	Chesterfield County	0.00334	0.00369	0.00454	0.00540
NOX	Aviation Emissions, Military	Chesterfield County	0.00000	0.00000	0.00000	0.00000
NOX	Commercial Marine Vessels	Chesterfield County	0.06686	0.06884	0.07418	0.08148
NOX	Locomotive	Chesterfield County	0.75105	0.65031	0.54578	0.47287
NOX	Military Marine Vessels	Chesterfield County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.82130	0.72290	0.62458	0.55982
NOX	Off-Road, Modeled, 2-Stroke	Chesterfield County	0.01364	0.01618	0.01786	0.02073
NOX	Off-Road, Modeled, 4-Stroke	Chesterfield County	0.44626	0.40700	0.33401	0.34835
NOX	Off-Road, Modeled, CNG	Chesterfield County	0.06864	0.05195	0.02666	0.01616
NOX	Off-Road, Modeled, Diesel	Chesterfield County	3.46681	3.33246	2.75657	1.65889
NOX	Off-Road, Modeled, LPG	Chesterfield County	0.57630	0.52012	0.22505	0.08953
NOX	Off-Road, Modeled, Marine, 2-Stroke	Chesterfield County	0.01326	0.01796	0.02725	0.03386
NOX	Off-Road, Modeled, Marine, 4-Stroke	Chesterfield County	0.01121	0.01213	0.01419	0.01642
NOX	Off-Road, Modeled, Marine, Diesel	Chesterfield County	0.01315	0.01425	0.01501	0.01562
NOX	Railroads	Chesterfield County	0.00229	0.00230	0.00212	0.00159
	TOTAL		4.61155	4.37434	3.41870	2.20113
NOX	Landfills	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
NOX	On-Site Incineration	Colonial Heights city	0.00481	0.00526	0.00629	0.00733
NOX	Open Burning	Colonial Heights city	0.00022	0.00024	0.00029	0.00033
	TOTAL		0.00503	0.00549	0.00658	0.00766
NOX	Commercial Fuel Consumption, Coal	Colonial Heights city	0.00285	0.00303	0.00299	0.00298
NOX	Commercial Fuel Consumption, Distillate	Colonial Heights city	0.01007	0.01180	0.01334	0.01474
NOX	Commercial Fuel Consumption, LP Gas	Colonial Heights city	0.00125	0.00133	0.00134	0.00139
NOX	Commercial Fuel Consumption, Nat Gas	Colonial Heights city	0.02517	0.02615	0.03125	0.03562

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
NOX	Commercial Fuel Consumption, Residual	Colonial Heights city	0.00264	0.00404	0.00421	0.00437
NOX	Commercial Fuel Consumption, Wood	Colonial Heights city	0.00001	0.00001	0.00001	0.00001
NOX	Industrial Fuel Consumption, Coal	Colonial Heights city	0.09813	0.09384	0.09453	0.09669
NOX	Industrial Fuel Consumption, Distillate	Colonial Heights city	0.00834	0.00832	0.00864	0.00956
NOX	Industrial Fuel Consumption, LP Gas	Colonial Heights city	0.00160	0.00158	0.00171	0.00188
NOX	Industrial Fuel Consumption, Nat Gas	Colonial Heights city	0.02810	0.03028	0.03300	0.03562
NOX	Industrial Fuel Consumption, Residual	Colonial Heights city	0.00550	0.00559	0.00559	0.00608
NOX	Industrial Fuel Consumption, Wood	Colonial Heights city	0.00391	0.00414	0.00460	0.00523
NOX	Residential Fuel Consumption, Coal	Colonial Heights city	0.00008	0.00008	0.00008	0.00008
NOX	Residential Fuel Consumption, Distillate	Colonial Heights city	0.00380	0.00379	0.00356	0.00313
NOX	Residential Fuel Consumption, LP Gas	Colonial Heights city	0.00175	0.00172	0.00189	0.00205
NOX	Residential Fuel Consumption, Nat Gas	Colonial Heights city	0.00641	0.00693	0.00791	0.00870
NOX	Residential Fuel Consumption, Wood	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.19961	0.20263	0.21466	0.22815
NOX	Forest Wildfires	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
NOX	Prescribed Burning	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
NOX	Structural Fires	Colonial Heights city	0.00009	0.00011	0.00012	0.00013
	TOTAL		0.00009	0.00011	0.00012	0.00013
NOX	Aviation Emissions, Air Taxi	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, Commercial	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, General Aviation	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, Military	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
NOX	Commercial Marine Vessels	Colonial Heights city	0.05573	0.05733	0.06168	0.06673
NOX	Locomotive	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
NOX	Military Marine Vessels	Colonial Heights city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.05573	0.05733	0.06168	0.06673
NOX	Off-Road, Modeled, 2-Stroke	Colonial Heights city	0.00046	0.00059	0.00066	0.00075
NOX	Off-Road, Modeled, 4-Stroke	Colonial Heights city	0.02090	0.01882	0.01475	0.01519
NOX	Off-Road, Modeled, CNG	Colonial Heights city	0.00522	0.00440	0.00216	0.00116
NOX	Off-Road, Modeled, Diesel	Colonial Heights city	0.03523	0.03488	0.03048	0.02051
NOX	Off-Road, Modeled, LPG	Colonial Heights city	0.05554	0.04984	0.02056	0.00759
NOX	Off-Road, Modeled, Marine, 2-Stroke	Colonial Heights city	0.00040	0.00054	0.00083	0.00103
NOX	Off-Road, Modeled, Marine, 4-Stroke	Colonial Heights city	0.00034	0.00037	0.00043	0.00050
NOX	Off-Road, Modeled, Marine, Diesel	Colonial Heights city	0.00040	0.00043	0.00045	0.00047
NOX	Railroads	Colonial Heights city	0.00037	0.00037	0.00034	0.00025
	TOTAL		0.11885	0.11025	0.07065	0.04746
NOX	Landfills	Hanover County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
NOX	On-Site Incineration	Hanover County	0.02967	0.03246	0.03902	0.04574

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
NOX	Open Burning	Hanover County	0.03836	0.04184	0.04994	0.05753
	TOTAL		0.06802	0.07429	0.08896	0.10327
NOX	Commercial Fuel Consumption, Coal	Hanover County	0.00936	0.00997	0.00983	0.00980
NOX	Commercial Fuel Consumption, Distillate	Hanover County	0.03310	0.03877	0.04383	0.04844
NOX	Commercial Fuel Consumption, LP Gas	Hanover County	0.00412	0.00438	0.00440	0.00456
NOX	Commercial Fuel Consumption, Nat Gas	Hanover County	0.08270	0.08592	0.10268	0.11706
NOX	Commercial Fuel Consumption, Residual	Hanover County	0.00868	0.01327	0.01384	0.01438
NOX	Commercial Fuel Consumption, Wood	Hanover County	0.00004	0.00004	0.00004	0.00004
NOX	Industrial Fuel Consumption, Coal	Hanover County	0.95902	0.91702	0.92381	0.94493
NOX	Industrial Fuel Consumption, Distillate	Hanover County	0.08152	0.08127	0.08444	0.09346
NOX	Industrial Fuel Consumption, LP Gas	Hanover County	0.01561	0.01545	0.01670	0.01841
NOX	Industrial Fuel Consumption, Nat Gas	Hanover County	0.27457	0.29587	0.32250	0.34806
NOX	Industrial Fuel Consumption, Residual	Hanover County	0.05372	0.05460	0.05466	0.05943
NOX	Industrial Fuel Consumption, Wood	Hanover County	0.03818	0.04045	0.04498	0.05114
NOX	Residential Fuel Consumption, Coal	Hanover County	0.00043	0.00044	0.00042	0.00041
NOX	Residential Fuel Consumption, Distillate	Hanover County	0.02046	0.02038	0.01917	0.01687
NOX	Residential Fuel Consumption, LP Gas	Hanover County	0.00941	0.00928	0.01017	0.01104
NOX	Residential Fuel Consumption, Nat Gas	Hanover County	0.03450	0.03731	0.04258	0.04680
NOX	Residential Fuel Consumption, Wood	Hanover County	0.00000	0.00000	0.00000	0.00000
	TOTAL		1.62541	1.62442	1.69404	1.78482
NOX	Forest Wildfires	Hanover County	0.00203	0.00203	0.00203	0.00203
NOX	Prescribed Burning	Hanover County	0.05918	0.05918	0.05918	0.05918
NOX	Structural Fires	Hanover County	0.00112	0.00127	0.00146	0.00153
	TOTAL		0.06232	0.06248	0.06267	0.06274
NOX	Aviation Emissions, Air Taxi	Hanover County	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, Commercial	Hanover County	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, General Aviation	Hanover County	0.00266	0.00293	0.00362	0.00430
NOX	Aviation Emissions, Military	Hanover County	0.00000	0.00000	0.00000	0.00000
NOX	Commercial Marine Vessels	Hanover County	0.00000	0.00000	0.00000	0.00000
NOX	Locomotive	Hanover County	0.42451	0.36757	0.30849	0.26728
NOX	Military Marine Vessels	Hanover County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.42717	0.37050	0.31210	0.27157
NOX	Off-Road, Modeled, 2-Stroke	Hanover County	0.01984	0.02364	0.02449	0.02800
NOX	Off-Road, Modeled, 4-Stroke	Hanover County	0.54299	0.48737	0.39562	0.41942
NOX	Off-Road, Modeled, CNG	Hanover County	0.03152	0.02164	0.01139	0.00752
NOX	Off-Road, Modeled, Diesel	Hanover County	1.80387	1.75480	1.50897	1.00637
NOX	Off-Road, Modeled, LPG	Hanover County	0.21549	0.19517	0.08737	0.03712
NOX	Off-Road, Modeled, Marine, 2-Stroke	Hanover County	0.00121	0.00163	0.00248	0.00308
NOX	Off-Road, Modeled, Marine, 4-Stroke	Hanover County	0.00102	0.00110	0.00129	0.00149
NOX	Off-Road, Modeled, Marine, Diesel	Hanover County	0.00120	0.00130	0.00136	0.00142

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
NOX	Railroads	Hanover County	0.00796	0.00798	0.00735	0.00551
	TOTAL		2.62510	2.49462	2.04032	1.50993
NOX	Landfills	Henrico County	0.02449	0.02543	0.02785	0.03221
	TOTAL		0.02449	0.02543	0.02785	0.03221
NOX	On-Site Incineration	Henrico County	0.08888	0.09725	0.11695	0.13716
NOX	Open Burning	Henrico County	0.01299	0.01416	0.01691	0.01948
	TOTAL		0.10187	0.11141	0.13386	0.15663
NOX	Commercial Fuel Consumption, Coal	Henrico County	0.04643	0.04943	0.04877	0.04858
NOX	Commercial Fuel Consumption, Distillate	Henrico County	0.16417	0.19227	0.21736	0.24025
NOX	Commercial Fuel Consumption, LP Gas	Henrico County	0.02044	0.02173	0.02181	0.02261
NOX	Commercial Fuel Consumption, Nat Gas	Henrico County	0.41018	0.42616	0.50925	0.58058
NOX	Commercial Fuel Consumption, Residual	Henrico County	0.04303	0.06583	0.06864	0.07130
NOX	Commercial Fuel Consumption, Wood	Henrico County	0.00022	0.00022	0.00022	0.00022
NOX	Industrial Fuel Consumption, Coal	Henrico County	2.78788	2.66580	2.68553	2.74693
NOX	Industrial Fuel Consumption, Distillate	Henrico County	0.23697	0.23625	0.24546	0.27168
NOX	Industrial Fuel Consumption, LP Gas	Henrico County	0.04537	0.04492	0.04854	0.05351
NOX	Industrial Fuel Consumption, Nat Gas	Henrico County	0.79817	0.86009	0.93751	1.01182
NOX	Industrial Fuel Consumption, Residual	Henrico County	0.15616	0.15873	0.15889	0.17277
NOX	Industrial Fuel Consumption, Wood	Henrico County	0.11099	0.11758	0.13076	0.14866
NOX	Residential Fuel Consumption, Coal	Henrico County	0.00128	0.00131	0.00126	0.00120
NOX	Residential Fuel Consumption, Distillate	Henrico County	0.06064	0.06039	0.05682	0.04999
NOX	Residential Fuel Consumption, LP Gas	Henrico County	0.02788	0.02751	0.03014	0.03273
NOX	Residential Fuel Consumption, Nat Gas	Henrico County	0.10227	0.11059	0.12621	0.13872
NOX	Residential Fuel Consumption, Wood	Henrico County	0.00000	0.00000	0.00000	0.00000
	TOTAL		5.01207	5.03880	5.28716	5.59155
NOX	Forest Wildfires	Henrico County	0.00474	0.00474	0.00474	0.00474
NOX	Prescribed Burning	Henrico County	0.00000	0.00000	0.00000	0.00000
NOX	Structural Fires	Henrico County	0.00103	0.00117	0.00135	0.00142
	TOTAL		0.00577	0.00591	0.00609	0.00616
NOX	Aviation Emissions, Air Taxi	Henrico County	0.00442	0.00488	0.00601	0.00714
NOX	Aviation Emissions, Commercial	Henrico County	0.44362	0.48947	0.60361	0.71665
NOX	Aviation Emissions, General Aviation	Henrico County	0.00207	0.00228	0.00282	0.00334
NOX	Aviation Emissions, Military	Henrico County	0.03430	0.03867	0.04188	0.04776
NOX	Commercial Marine Vessels	Henrico County	0.06801	0.07001	0.07541	0.08248
NOX	Locomotive	Henrico County	0.76194	0.65974	0.55369	0.47972
NOX	Military Marine Vessels	Henrico County	0.00000	0.00000	0.00000	0.00000
	TOTAL		1.31436	1.26505	1.28342	1.33710
NOX	Off-Road, Modeled, 2-Stroke	Henrico County	0.01116	0.01299	0.01332	0.01484

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
NOX	Off-Road, Modeled, 4-Stroke	Henrico County	0.43197	0.39408	0.31982	0.33221
NOX	Off-Road, Modeled, CNG	Henrico County	0.07276	0.05393	0.02791	0.01728
NOX	Off-Road, Modeled, Diesel	Henrico County	5.75583	5.51953	4.53682	2.67267
NOX	Off-Road, Modeled, LPG	Henrico County	0.58563	0.52928	0.23189	0.09381
NOX	Off-Road, Modeled, Marine, 2-Stroke	Henrico County	0.00522	0.00707	0.01074	0.01334
NOX	Off-Road, Modeled, Marine, 4-Stroke	Henrico County	0.00442	0.00478	0.00559	0.00647
NOX	Off-Road, Modeled, Marine, Diesel	Henrico County	0.00518	0.00561	0.00591	0.00615
NOX	Railroads	Henrico County	0.01050	0.01053	0.00969	0.00728
	TOTAL		6.88267	6.53779	5.16170	3.16404
NOX	Landfills	Hopewell city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
NOX	On-Site Incineration	Hopewell city	0.00867	0.00951	0.01148	0.01356
NOX	Open Burning	Hopewell city	0.00005	0.00006	0.00007	0.00008
	TOTAL		0.00873	0.00957	0.01155	0.01365
NOX	Commercial Fuel Consumption, Coal	Hopewell city	0.00171	0.00182	0.00180	0.00179
NOX	Commercial Fuel Consumption, Distillate	Hopewell city	0.00606	0.00710	0.00802	0.00887
NOX	Commercial Fuel Consumption, LP Gas	Hopewell city	0.00075	0.00080	0.00080	0.00083
NOX	Commercial Fuel Consumption, Nat Gas	Hopewell city	0.01514	0.01573	0.01880	0.02143
NOX	Commercial Fuel Consumption, Residual	Hopewell city	0.00159	0.00243	0.00253	0.00263
NOX	Commercial Fuel Consumption, Wood	Hopewell city	0.00001	0.00001	0.00001	0.00001
NOX	Industrial Fuel Consumption, Coal	Hopewell city	0.51037	0.48802	0.49163	0.50287
NOX	Industrial Fuel Consumption, Distillate	Hopewell city	0.04338	0.04325	0.04494	0.04974
NOX	Industrial Fuel Consumption, LP Gas	Hopewell city	0.00831	0.00822	0.00889	0.00980
NOX	Industrial Fuel Consumption, Nat Gas	Hopewell city	0.14612	0.15745	0.17163	0.18523
NOX	Industrial Fuel Consumption, Residual	Hopewell city	0.02859	0.02906	0.02909	0.03163
NOX	Industrial Fuel Consumption, Wood	Hopewell city	0.02032	0.02153	0.02394	0.02721
NOX	Residential Fuel Consumption, Coal	Hopewell city	0.00010	0.00011	0.00010	0.00010
NOX	Residential Fuel Consumption, Distillate	Hopewell city	0.00495	0.00493	0.00464	0.00408
NOX	Residential Fuel Consumption, LP Gas	Hopewell city	0.00227	0.00224	0.00246	0.00267
NOX	Residential Fuel Consumption, Nat Gas	Hopewell city	0.00834	0.00902	0.01030	0.01132
NOX	Residential Fuel Consumption, Wood	Hopewell city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.79801	0.79172	0.81956	0.86020
NOX	Forest Wildfires	Hopewell city	0.00000	0.00000	0.00000	0.00000
NOX	Prescribed Burning	Hopewell city	0.00000	0.00000	0.00000	0.00000
NOX	Structural Fires	Hopewell city	0.00017	0.00020	0.00022	0.00024
	TOTAL		0.00017	0.00020	0.00022	0.00024
NOX	Aviation Emissions, Air Taxi	Hopewell city	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, Commercial	Hopewell city	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, General Aviation	Hopewell city	0.00000	0.00000	0.00000	0.00000

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
NOX	Aviation Emissions, Military	Hopewell city	0.00000	0.00000	0.00000	0.00000
NOX	Commercial Marine Vessels	Hopewell city	0.05425	0.05584	0.06014	0.06576
NOX	Locomotive	Hopewell city	0.50070	0.43354	0.36385	0.31525
NOX	Military Marine Vessels	Hopewell city	0.00000	0.00000	0.00000	0.00000
TOTAL			0.55495	0.48938	0.42400	0.38101
NOX	Off-Road, Modeled, 2-Stroke	Hopewell city	0.00123	0.00152	0.00161	0.00181
NOX	Off-Road, Modeled, 4-Stroke	Hopewell city	0.04506	0.04010	0.03122	0.03233
NOX	Off-Road, Modeled, CNG	Hopewell city	0.00938	0.00799	0.00390	0.00208
NOX	Off-Road, Modeled, Diesel	Hopewell city	0.06525	0.06490	0.05723	0.03896
NOX	Off-Road, Modeled, LPG	Hopewell city	0.10244	0.09187	0.03776	0.01386
NOX	Off-Road, Modeled, Marine, 2-Stroke	Hopewell city	0.00040	0.00054	0.00083	0.00103
NOX	Off-Road, Modeled, Marine, 4-Stroke	Hopewell city	0.00034	0.00037	0.00043	0.00050
NOX	Off-Road, Modeled, Marine, Diesel	Hopewell city	0.00040	0.00043	0.00045	0.00047
NOX	Railroads	Hopewell city	0.00010	0.00010	0.00009	0.00007
TOTAL			0.22460	0.20783	0.13351	0.09111
NOX	Landfills	Petersburg city	0.00000	0.00000	0.00000	0.00000
TOTAL			0.00000	0.00000	0.00000	0.00000
NOX	On-Site Incineration	Petersburg city	0.01184	0.01297	0.01563	0.01841
NOX	Open Burning	Petersburg city	0.00137	0.00149	0.00036	0.00041
TOTAL			0.01321	0.01446	0.01599	0.01882
NOX	Commercial Fuel Consumption, Coal	Petersburg city	0.00416	0.00442	0.00436	0.00435
NOX	Commercial Fuel Consumption, Distillate	Petersburg city	0.01469	0.01721	0.01945	0.02150
NOX	Commercial Fuel Consumption, LP Gas	Petersburg city	0.00183	0.00194	0.00195	0.00202
NOX	Commercial Fuel Consumption, Nat Gas	Petersburg city	0.03671	0.03814	0.04557	0.05195
NOX	Commercial Fuel Consumption, Residual	Petersburg city	0.00385	0.00589	0.00614	0.00638
NOX	Commercial Fuel Consumption, Wood	Petersburg city	0.00002	0.00002	0.00002	0.00002
NOX	Industrial Fuel Consumption, Coal	Petersburg city	0.44783	0.42822	0.43139	0.44125
NOX	Industrial Fuel Consumption, Distillate	Petersburg city	0.03807	0.03795	0.03943	0.04364
NOX	Industrial Fuel Consumption, LP Gas	Petersburg city	0.00729	0.00722	0.00780	0.00860
NOX	Industrial Fuel Consumption, Nat Gas	Petersburg city	0.12821	0.13816	0.15060	0.16253
NOX	Industrial Fuel Consumption, Residual	Petersburg city	0.02509	0.02550	0.02552	0.02775
NOX	Industrial Fuel Consumption, Wood	Petersburg city	0.01783	0.01889	0.02100	0.02388
NOX	Residential Fuel Consumption, Coal	Petersburg city	0.00016	0.00016	0.00015	0.00015
NOX	Residential Fuel Consumption, Distillate	Petersburg city	0.00732	0.00729	0.00686	0.00604
NOX	Residential Fuel Consumption, LP Gas	Petersburg city	0.00337	0.00332	0.00364	0.00395
NOX	Residential Fuel Consumption, Nat Gas	Petersburg city	0.01235	0.01336	0.01524	0.01676
NOX	Residential Fuel Consumption, Wood	Petersburg city	0.00000	0.00000	0.00000	0.00000
TOTAL			0.74876	0.74768	0.77914	0.82077
NOX	Forest Wildfires	Petersburg city	0.00000	0.00000	0.00000	0.00000

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
NOX	Prescribed Burning	Petersburg city	0.00000	0.00000	0.00000	0.00000
NOX	Structural Fires	Petersburg city	0.00030	0.00034	0.00039	0.00041
	TOTAL		0.00030	0.00034	0.00039	0.00041
NOX	Aviation Emissions, Air Taxi	Petersburg city	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, Commercial	Petersburg city	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, General Aviation	Petersburg city	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, Military	Petersburg city	0.00009	0.00010	0.00011	0.00013
NOX	Commercial Marine Vessels	Petersburg city	0.13932	0.14333	0.15419	0.16682
NOX	Locomotive	Petersburg city	0.68575	0.59376	0.49832	0.43175
NOX	Military Marine Vessels	Petersburg city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.82516	0.73720	0.65262	0.59870
NOX	Off-Road, Modeled, 2-Stroke	Petersburg city	0.00025	0.00037	0.00048	0.00055
NOX	Off-Road, Modeled, 4-Stroke	Petersburg city	0.02508	0.02277	0.01752	0.01763
NOX	Off-Road, Modeled, CNG	Petersburg city	0.01316	0.01104	0.00542	0.00294
NOX	Off-Road, Modeled, Diesel	Petersburg city	0.07492	0.07358	0.06277	0.03942
NOX	Off-Road, Modeled, LPG	Petersburg city	0.13765	0.12360	0.05115	0.01894
NOX	Off-Road, Modeled, Marine, 2-Stroke	Petersburg city	0.00029	0.00039	0.00059	0.00074
NOX	Off-Road, Modeled, Marine, 4-Stroke	Petersburg city	0.00027	0.00030	0.00035	0.00040
NOX	Off-Road, Modeled, Marine, Diesel	Petersburg city	0.00040	0.00043	0.00045	0.00047
NOX	Railroads	Petersburg city	0.00403	0.00404	0.00372	0.00279
	TOTAL		0.25606	0.23652	0.14246	0.08388
NOX	Landfills	Prince George County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
NOX	On-Site Incineration	Prince George County	0.00977	0.01067	0.01278	0.01489
NOX	Open Burning	Prince George County	0.11671	0.12731	0.03039	0.03501
NOX	Commercial Fuel Consumption, Coal	Prince George County	0.00328	0.00349	0.00345	0.00343
NOX	Commercial Fuel Consumption, Distillate	Prince George County	0.01160	0.01358	0.01536	0.01698
NOX	Commercial Fuel Consumption, LP Gas	Prince George County	0.00144	0.00154	0.00154	0.00160
NOX	Commercial Fuel Consumption, Nat Gas	Prince George County	0.02898	0.03011	0.03598	0.04102
NOX	Commercial Fuel Consumption, Residual	Prince George County	0.00304	0.00465	0.00485	0.00504
NOX	Commercial Fuel Consumption, Wood	Prince George County	0.00002	0.00002	0.00002	0.00002
NOX	Industrial Fuel Consumption, Coal	Prince George County	0.20671	0.19766	0.19913	0.20368
NOX	Industrial Fuel Consumption, Distillate	Prince George County	0.01757	0.01752	0.01820	0.02014
NOX	Industrial Fuel Consumption, LP Gas	Prince George County	0.00336	0.00333	0.00360	0.00397
NOX	Industrial Fuel Consumption, Nat Gas	Prince George County	0.05918	0.06377	0.06951	0.07502
NOX	Industrial Fuel Consumption, Residual	Prince George County	0.01158	0.01177	0.01178	0.01281
NOX	Industrial Fuel Consumption, Wood	Prince George County	0.00823	0.00872	0.00970	0.01102
NOX	Residential Fuel Consumption, Coal	Prince George County	0.00016	0.00016	0.00016	0.00015

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
NOX	Residential Fuel Consumption, Distillate	Prince George County	0.00764	0.00761	0.00716	0.00630
NOX	Residential Fuel Consumption, LP Gas	Prince George County	0.00351	0.00347	0.00380	0.00413
NOX	Residential Fuel Consumption, Nat Gas	Prince George County	0.01289	0.01394	0.01591	0.01748
NOX	Residential Fuel Consumption, Wood	Prince George County	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.37921	0.38134	0.40013	0.42279
NOX	Forest Wildfires	Prince George County	0.00348	0.00348	0.00348	0.00348
NOX	Prescribed Burning	Prince George County	0.01397	0.01397	0.01397	0.01397
NOX	Structural Fires	Prince George County	0.00020	0.00022	0.00026	0.00027
	TOTAL		0.01764	0.01767	0.01770	0.01771
NOX	Aviation Emissions, Air Taxi	Prince George County	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, Commercial	Prince George County	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, General Aviation	Prince George County	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, Military	Prince George County	0.00000	0.00000	0.00000	0.00000
NOX	Commercial Marine Vessels	Prince George County	0.23086	0.23750	0.25549	0.27642
NOX	Locomotive	Prince George County	0.85990	0.74456	0.62488	0.54140
NOX	Military Marine Vessels	Prince George County	0.00000	0.00000	0.00000	0.00000
	TOTAL		1.09076	0.98206	0.88038	0.81783
NOX	Off-Road, Modeled, 2-Stroke	Prince George County	0.00169	0.00188	0.00244	0.00308
NOX	Off-Road, Modeled, 4-Stroke	Prince George County	0.02887	0.02771	0.02416	0.02429
NOX	Off-Road, Modeled, CNG	Prince George County	0.00679	0.00529	0.00258	0.00147
NOX	Off-Road, Modeled, Diesel	Prince George County	0.57224	0.54250	0.44166	0.26593
NOX	Off-Road, Modeled, LPG	Prince George County	0.06147	0.05532	0.02345	0.00903
NOX	Off-Road, Modeled, Marine, 2-Stroke	Prince George County	0.01213	0.01644	0.02494	0.03099
NOX	Off-Road, Modeled, Marine, 4-Stroke	Prince George County	0.01149	0.01244	0.01455	0.01683
NOX	Off-Road, Modeled, Marine, Diesel	Prince George County	0.01673	0.01814	0.01910	0.01988
NOX	Railroads	Prince George County	0.00356	0.00357	0.00328	0.00246
	TOTAL		0.71497	0.68328	0.55617	0.37397
NOX	Landfills	Richmond city	0.00000	0.00000	0.00000	0.00000
	TOTAL		0.00000	0.00000	0.00000	0.00000
NOX	On-Site Incineration	Richmond city	0.06587	0.07209	0.08675	0.10185
NOX	Open Burning	Richmond city	0.00027	0.00030	0.00036	0.00041
	TOTAL		0.06614	0.07239	0.08711	0.10226
NOX	Commercial Fuel Consumption, Coal	Richmond city	0.04216	0.04488	0.04429	0.04411
NOX	Commercial Fuel Consumption, Distillate	Richmond city	0.14908	0.17458	0.19737	0.21815
NOX	Commercial Fuel Consumption, LP Gas	Richmond city	0.01856	0.01974	0.01980	0.02053
NOX	Commercial Fuel Consumption, Nat Gas	Richmond city	0.37245	0.38697	0.46241	0.52719
NOX	Commercial Fuel Consumption, Residual	Richmond city	0.03907	0.05977	0.06232	0.06474
NOX	Commercial Fuel Consumption, Wood	Richmond city	0.00020	0.00020	0.00020	0.00020

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Table 7.2-5
Stationary Area and Nonroad Mobile Source Emissions, by Line Item, Controlled

Category		Locality	2002	2005	2011	2018
NOX	Industrial Fuel Consumption, Coal	Richmond city	3.66526	3.50476	3.53070	3.61142
NOX	Industrial Fuel Consumption, Distillate	Richmond city	0.31154	0.31060	0.32271	0.35718
NOX	Industrial Fuel Consumption, LP Gas	Richmond city	0.05965	0.05905	0.06382	0.07035
NOX	Industrial Fuel Consumption, Nat Gas	Richmond city	1.04936	1.13077	1.23256	1.33025
NOX	Industrial Fuel Consumption, Residual	Richmond city	0.20531	0.20868	0.20890	0.22714
NOX	Industrial Fuel Consumption, Wood	Richmond city	0.14592	0.15459	0.17191	0.19544
NOX	Residential Fuel Consumption, Coal	Richmond city	0.00093	0.00095	0.00091	0.00087
NOX	Residential Fuel Consumption, Distillate	Richmond city	0.04383	0.04365	0.04107	0.03613
NOX	Residential Fuel Consumption, LP Gas	Richmond city	0.02015	0.01988	0.02178	0.02366
NOX	Residential Fuel Consumption, Nat Gas	Richmond city	0.07392	0.07993	0.09122	0.10026
NOX	Residential Fuel Consumption, Wood	Richmond city	0.00000	0.00000	0.00000	0.00000
	TOTAL		6.19738	6.19899	6.47196	6.82763
NOX	Forest Wildfires	Richmond city	0.00000	0.00000	0.00000	0.00000
NOX	Prescribed Burning	Richmond city	0.00000	0.00000	0.00000	0.00000
NOX	Structural Fires	Richmond city	0.00151	0.00171	0.00197	0.00207
	TOTAL		0.00151	0.00171	0.00197	0.00207
NOX	Aviation Emissions, Air Taxi	Richmond city	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, Commercial	Richmond city	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, General Aviation	Richmond city	0.00000	0.00000	0.00000	0.00000
NOX	Aviation Emissions, Military	Richmond city	0.00000	0.00000	0.00000	0.00000
NOX	Commercial Marine Vessels	Richmond city	0.06801	0.07001	0.07541	0.08248
NOX	Locomotive	Richmond city	1.12114	0.97076	0.81472	0.70588
NOX	Military Marine Vessels	Richmond city	0.00000	0.00000	0.00000	0.00000
	TOTAL		1.18915	1.04077	0.89013	0.78836
NOX	Off-Road, Modeled, 2-Stroke	Richmond city	0.00861	0.01104	0.01202	0.01357
NOX	Off-Road, Modeled, 4-Stroke	Richmond city	0.40789	0.36978	0.29794	0.31195
NOX	Off-Road, Modeled, CNG	Richmond city	0.09463	0.07262	0.03641	0.02158
NOX	Off-Road, Modeled, Diesel	Richmond city	0.65759	0.65848	0.59235	0.42123
NOX	Off-Road, Modeled, LPG	Richmond city	0.80431	0.72507	0.30912	0.12026
NOX	Off-Road, Modeled, Marine, 2-Stroke	Richmond city	0.00241	0.00327	0.00495	0.00616
NOX	Off-Road, Modeled, Marine, 4-Stroke	Richmond city	0.00204	0.00221	0.00258	0.00299
NOX	Off-Road, Modeled, Marine, Diesel	Richmond city	0.00239	0.00259	0.00273	0.00284
NOX	Railroads	Richmond city	0.01273	0.01275	0.01174	0.00881
	TOTAL		1.99261	1.85782	1.26985	0.90938

7.3. Site Specific Area Source Emissions Estimates – Military Activities

Area and facility specific emissions estimates have been developed and made available for use to supplement the general regional estimates of ozone precursor emissions. A special effort was made as part of the maintenance plan effort to obtain and include updated information on the military activities that take place in the Richmond-Petersburg area. As a result a majority of the military installations in the area provided updated activity and/or emissions information that have been included in the maintenance plan.

emissions calculations. These estimates have been included in the regional area source inventories, and can be identified separately as needed for future conformity analysis or other purposes. Specifically, future estimates from the expected expansion at Fort Lee resulting from recent BRAC (Base Realignment and Closure) decisions have been included, as noted in Table 7.3-1.

Table 7.3-1: Estimated Emissions Due to BRAC for Fort Lee (Tons/Year)

	2007		2008		2009		2010		2011		2012	
	NOX	VOC	NOX	VOC	NOX	VOC	NOX	VOC	NOX	VOC	NOX	VOC
Site Grading	3.72	0.39	12.9	1.36	2.77	0.29	2.95	0.31	1.51	0.16	-	-
Construction Site Hauling	0.17	0.01	0.58	0.05	0.11	0.01	0.11	0.01	0.05	0.00	-	-
Building Construction	64.2	11.8	286.3	52.8	269.8	49.7	98.5	18.2	76.8	14.2	26.0	4.79
Asphalt Application	-	-	-	-	-	-	1.12	0.12	1.12	0.12	1.12	0.12
Architectural Coating	-	-	-	-	-	0.82	-	8.53	-	7.47	-	7.50
Construction Worker Trips	0.42	0.61	2.25	3.22	2.24	3.19	0.93	1.32	0.73	1.03	0.15	0.21
POVs*, GOVs*, & Engine Training	-	-	-	-	9.14	6.72	38.1	27.4	48.7	34.5	49.4	33.6
Boilers/Heaters - Natural Gas	-	-	-	-	3.21	0.18	17.0	0.94	18.3	1.01	25.1	1.40
Emergency Generators	-	-	-	-	-	-	2.01	0.1	6.03	0.2	8.04	0.2
Area Sources	-	-	-	-	-	-	0.46	3.51	0.46	3.51	0.46	3.51
Paint Spray Booth(s)	-	-	-	-	-	-	-	1.32	-	1.32	-	1.32
Ordnance Detonation/Weapons Use	-	-	-	-	-	-	-	-	-	-	-	-
Degreasing/Parts Cleaning	-	-	-	-	-	-	-	-	-	-	-	-
Stage I Filling (AAFES)	-	-	-	-	-	0.53	-	2.38	-	2.78	-	3.42
Total (ton/yr)	69	13	302	57	287	61	161	64	154	66	110	56

Estimated Emissions Due to BRAC for Fort Lee (Tons/day)

	2007		2008		2009		2010		2011		2012	
	NOX	VOC										
Site Grading	0.014	0.002	0.050	0.005	0.011	0.001	0.011	0.001	0.006	0.001	-	-
Construction Site Hauling	0.001	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-
Building Construction	0.247	0.046	1.101	0.203	1.038	0.191	0.379	0.070	0.295	0.054	0.100	0.018
Asphalt Application	-	-	-	-	-	-	0.004	0.000	0.004	0.000	0.004	0.000
Architectural Coating	-	-	-	-	-	0.003	-	0.033	-	0.029	-	0.029
Construction Worker Trips	0.002	0.002	0.009	0.012	0.009	0.012	0.004	0.005	0.003	0.004	0.001	0.001
POVs*, GOVs*, & Engine Training	-	-	-	-	0.035	0.026	0.146	0.106	0.187	0.133	0.190	0.129
Boilers/Heaters - Natural Gas	-	-	-	-	0.012	0.001	0.065	0.004	0.070	0.004	0.096	0.005
Emergency Generators	-	-	-	-	-	-	0.008	0.000	0.023	0.001	0.031	0.001
Area Sources	-	-	-	-	-	-	0.002	0.013	0.002	0.013	0.002	0.013
Paint Spray Booth(s)	-	-	-	-	-	-	-	0.005	-	0.005	0.000	0.005
Ordnance Detonation/Weapons Use	-	-	-	-	-	-	-	-	-	-	-	-
Degreasing/Parts Cleaning	-	-	-	-	-	-	-	-	-	-	-	-
Stage I Filling (AAFES)	-	-	-	-	-	0.002	-	0.009	-	0.011	-	0.013
Total (tons/day)	0.264	0.049	1.162	0.221	1.105	0.236	0.620	0.246	0.591	0.255	0.424	0.216

8. Emission Reduction Calculations

This section contains information concerning the various control measures that have been included and produce emissions reductions in the Richmond area maintenance plan. When combined, these measures are predicted to keep the area below the established attainment emissions caps established by the plan. A total of nine measures are identified, quantified, and documented in this section. These measures range from federal control programs on motor vehicles and nonroad engines to local controls on industries, gasoline stations, and open burning. These measures and the associated emissions benefits are provided in Table 8-1.

Table 8-1 Maintenance Plan Control Measures and Emission Reductions

Emission Control Measure	Emissions Reductions (tons/day)	
	2011	2018
Volatile Organic Compounds (VOC)		
Federal Tier 2/Low Sulfur Gasoline Rule	1.678 tons/day	3.582 tons/day
Federal Heavy Duty Diesel Engine Rule	0.076 tons/day	0.211 tons/day
Motor Vehicle Vapor Recovery/Stage II	0.674 tons/day	0.898 tons/day
Reformulated Gasoline (On-Road)	4.964 tons/day	3.433 tons/day
Reformulated Gasoline (Non-Road)	0.080 tons/day	0.081 tons/day
Reformulated Gasoline (Area)	0.065 tons/day	0.047 tons/day
Federal Nonroad Engine/Equipment Rules	4.617 tons/day	5.000 tons/day
Stage I Vapor Recovery	0.808 tons/day	0.803 tons/day
Open burning restrictions	0.584 tons/day	0.673 tons day
CTG RACT	0.369 tons/day	0.429 tons/day
TOTAL VOC REDUCTIONS:	13.915 tons/day	15.157 tons/day
Nitrogen Oxides (NO_x)		
Federal Tier 2/Low Sulfur Gasoline Rule	9.026 tons/day	16.809 tons/day
Federal Heavy Duty Diesel Engine Rule	5.093 tons/day	13.466 tons/day
Reformulated Gasoline (On-Road)	0.214 tons/day	0.161 tons/day
Federal Nonroad Engine/Equipment Rules	3.719 tons/day	8.193 tons/day
Open Burning Restrictions	0.123 tons/day	0.142 tons/day
TOTAL NO_x REDUCTIONS:	18.175 tons/day	38.771 tons/day
Carbon Monoxide (CO)		
Federal Tier 2/Low Sulfur Gasoline Rule	28.744 tons/day	52.945 tons/day

Table 8-1 Maintenance Plan Control Measures and Emission Reductions

Emission Control Measure	Emissions Reductions (tons/day)	
	2011	2018
Federal Heavy Duty Diesel Engine Rule	1.985 tons/day	4.115 tons/day
Reformulated Gasoline (On-Road)	21.297 tons/day	18.503 tons/day
TOTAL CO REDUCTIONS:	52.026 tons/day	75.563 tons/day

Please note that due to the limitations of the EPA models used to develop some of these estimates, the reductions identified differ in what they represent. Some like the federal vehicle and nonroad estimates represent reductions from attainment (baseline) estimates. Others, like the local controls are estimates from uncontrolled emission estimates during the selected projection years. Therefore the reduction totals presented here, do not exactly match the overall area reductions predicted in the maintenance plan and used for the maintenance emissions tests.

Control Measure: Federal Tier 2 Vehicle and Low Sulfur Fuel Standards

Measure Name:	Federal Tier 2 Vehicle and Low Sulfur Fuel Standards	Description:
		The following national motor vehicle emission reduction measures have or will be implemented that will reduce mobile source emissions in the Richmond area. These measures include:

VOC

Reductions in 2011 (tons/day)	1.678
Reductions in 2018 (tons/day)	3.582

* Federal Tier 2 Vehicle & Low Sulfur Fuel Standards

NOX

Reductions in 2011 (tons/day)	9.026
Reductions in 2018 (tons/day)	16.809

CO

Reductions in 2011 (tons/day)	28.744
Reductions in 2018 (tons/day)	52.945

Assumptions: The following calculations and benefits are based on the EPA Mobile6 emissions model.

Emission Reductions

VOC Calculations

EMISSIONS SCENARIO	VOC EMISSIONS
2011 w/o Tier2	33.021 tpd
2011 w/ Tier2	31.343 tpd
2018 w/o Tier2	26.427 tpd
2018 w/ Tier2	22.845 tpd
<i>Total daily VOC reductions (2011):</i>	1.678 tpd
<i>Total daily VOC reductions (2018):</i>	3.582 tpd

NOx Calculations

EMISSIONS SCENARIO	NO _x EMISSIONS
2011 w/o Tier2	49.686 tpd
2011 w/ Tier2	40.661 tpd
2018 w/o Tier2	40.636 tpd
2018 w/ Tier2	23.827 tpd
<i>Total daily NOX reductions (2011):</i>	9.026 tpd
<i>Total daily NOX reductions (2018):</i>	16.809 tpd

CO Calculations

EMISSIONS SCENARIO	CO EMISSIONS
2011 w/o Tier2	384.108 tpd
2011 w/ Tier2	355.364 tpd
2018 w/o Tier2	373.980 tpd
2018 w/ Tier2	321.035 tpd
<i>Total daily CO reductions (2011):</i>	28.744 tpd
<i>Total daily CO reductions (2018):</i>	52.945 tpd

Implementation Schedule and Status

Currently implemented by Federal regulations.

Control Measure: Federal Heavy Duty Diesel Engine Standards

Measure Name:	Federal Heavy Duty Diesel Engine Standards	Description:
The following national motor vehicle emission reduction measures have or will be implemented that will reduce mobile source emissions in the Richmond area. These measures include:		

VOC

Reductions in 2011 (tons/day)	0.076
Reductions in 2018 (tons/day)	0.211

* Heavy Duty Diesel Engine Standards

NOX

Reductions in 2011 (tons/day)	5.093
Reductions in 2018 (tons/day)	13.466

CO

Reductions in 2011 (tons/day)	1.985
Reductions in 2018 (tons/day)	4.115

Assumptions: The following calculations and benefits are based on the EPA Mobile6 emissions model.

Emission Reductions

<i>Calculations</i>					
EMISSIONS SCENARIO	VOC EMISSIONS		NOx EMISSIONS		CO EMISSIONS
2011 w/o HDDV	30.868	tpd	45.734	tpd	355.063 tpd
2011 w/ HDDV	30.792	tpd	40.641	tpd	353.078 tpd
2018 w/o HDDV	22.701	tpd	37.278	tpd	323.239 tpd
2018 w/ HDDV	22.49	tpd	23.812	tpd	319.124 tpd
<i>Total daily reductions (2011):</i>	<i>0.076</i>	<i>tpd</i>	<i>5.093</i>	<i>tpd</i>	<i>1.985 tpd</i>
<i>Total daily reductions (2018):</i>	<i>0.211</i>	<i>tpd</i>	<i>13.466</i>	<i>tpd</i>	<i>4.115 tpd</i>

Implementation Schedule and Status

Currently implemented by Federal regulations.

Control Measure: Motor Vehicle Vapor Recovery Controls

Measure Name:	Motor Vehicle Vapor Recovery Controls	Description: The following national motor vehicle emission reduction measures have or will be implemented that will reduce mobile source emissions in the Richmond area. These measures include: * Stage II Vapor Recovery Controls * Vehicle Onboard Vapor Recovery Controls
VOC		
Reductions in 2011 (tons/day)	0.674	
Reductions in 2018 (tons/day)	0.898	

NOX	
Reductions in 2011 (tons/day)	N/A
Reductions in 2018 (tons/day)	N/A

Assumptions

- The following calculations and benefits are based on the EPA Mobile6 emissions model.

Emission Reductions

2011

EMISSIONS SCENARIO	VOC EMISSIONS
2005 Attainment Year	1.702 tpd
2011 w/ Stage II & Onboard VR	1.028 tpd
<i>Total daily VOC reductions:</i>	<i>0.674 tpd</i>

2018

EMISSIONS SCENARIO	VOC EMISSIONS
2005 Attainment Year	1.702 tpd
2018 w/ Stage II & Onboard VR	0.804 tpd
<i>Total daily VOC reductions:</i>	<i>0.898 tpd</i>

Implementation Schedule and Status

Currently implemented by Federal regulations. Stage II limited to 1-hour ozone nonattainment area. Stage II not expanded to newly designated 8-hr ozone nonattainment jurisdictions.

Control Measure: Reformulated Gasoline (Onroad)

Measure Name:	Reformulated Gasoline (Onroad)	Description:
The following motor vehicle emission reduction measure reflects emission benefits resulting from the use of reformulated gasoline in highway vehicles in the Richmond area.		

VOC

Reductions in 2011 (tons/day)	4.964
Reductions in 2018 (tons/day)	3.433

NOX

Reductions in 2011 (tons/day)	0.214
Reductions in 2018 (tons/day)	0.161

CO

Reductions in 2011 (tons/day)	21.297
Reductions in 2018 (tons/day)	18.503

Assumptions

- The following calculations and benefits are based on the EPA Mobile6 emissions model.
-

Emission Reductions

<i>Calculations</i>		EMISSIONS SCENARIO	VOC EMISSIONS	NOx EMISSIONS	CO EMISSIONS
2011 w/o RFG		36.308	tpd	40.875	tpd
2011 w/ RFG		31.343	tpd	40.661	tpd
2018 w/o RFG		26.277	tpd	23.988	tpd
2018 w/ RFG		22.845	tpd	23.827	tpd
Total daily reductions (2011):		4.964	tpd	0.214	tpd
Total daily reductions (2018):		3.433	tpd	0.161	tpd
					21.297 tpd
					18.503 tpd

Implementation Schedule and Status

Reformulated gasoline not expanded to newly designated 8-hour ozone nonattainment jurisdictions.

Control Measure: Federal Nonroad Engine/Equipment Standards

Description:

The following national nonroad engine and equipment standards have or will be implemented that will reduce nonroad emissions in the 9 Richmond nonattainment area jurisdictions.

VOC

Reductions in 2011 (tons/day)	4.617
Reductions in 2018 (tons/day)	5.000

* Diesel engine standards

* Gasoline engine standards

NOX

Reductions in 2011 (tons/day)	3.719
Reductions in 2018 (tons/day)	8.193

Assumptions

- The following calculations and benefits are based on the EPA Nonroad emissions model.

Emission Reductions

2011

EMISSIONS SCENARIO	VOC EMISSIONS	NOX EMISSIONS
2005 Attainment Year	20.43413	16.86232
2011 w/Nonroad Controls**	15.81738	13.14317
Total daily VOC reductions:	4.61675	3.71915

2018

EMISSIONS SCENARIO	VOC EMISSIONS	NOX EMISSIONS
2005 Attainment Year	20.43413	16.86232
2018 w/Nonroad Controls**	15.43411	8.66926
Total daily VOC reductions:	5.00002	8.19306

**Denotes Nonroad Emissions with national equipment standards included, but without RFG in Petersburg and Prince George (No RFG). Benefit from Nonroad RFG is quantified elsewhere

Implementation Schedule and Status

Currently implemented by Federal regulations.

Control Measure: Stage I Vapor Recovery

Measure Name:	Stage I Vapor Recovery	Description:
		Applies to Petersburg and Prince George. Requires Balanced/Submerged fill in place of Submerged Tank Filling and Tank Truck in Transit Controls

VOC

Reductions in 2011 (tons/day)	0.80822
Reductions in 2018 (tons/day)	0.80260

Assumptions

- Control already in place in 7 Richmond nonattainment area jurisdictions.
- Estimate includes uncontrolled tank filling, working, transit, and breathing losses.

Emission Reductions

2011

Uncontrolled VOC Emissions =	1.12256	tpd VOC
Controlled VOC Emissions =	0.31434	tpd VOC
<i>Total Reductions</i> =	<i>0.80822</i>	<i>tpd VOC</i>

2018

Uncontrolled VOC Emissions =	1.11475	tpd VOC
Controlled VOC Emissions =	0.31215	tpd VOC
<i>Total Reductions</i> =	<i>0.80260</i>	<i>tpd VOC</i>

Implementation Schedule and Status

State regulation to require Stage I vapor recovery controls will be expanded to cover the two new jurisdictions involved. This regulatory revision process has begun. This control results in reductions from tank truck loading and unloading (Stage I) and Tank Trucks in Transit Controls.

Control Measure: Open Burning Restriction

Measure Name:
SCC: 2610020000

Open Burning Bans/Restrictions

Description:
Application of ozone season open burning restriction, Rule 4-40. Applied to 2 Richmond Jurisdictions. (Petersburg and Prince George)

VOC

Reductions in 2011 (tons/day)	0.58426
Reductions in 2018 (tons/day)	0.67299

Issues

- Measure is enforced by local fire marshals

NOX

Reductions in 2011 (tons/day)	0.12300
Reductions in 2018 (tons/day)	0.14168

Assumptions

Restriction was already in place in 7 Richmond Jurisdictions

Assume 100% Control Efficiency, 80% Rule Effectiveness, yields a net 80% Control Effectiveness

Emission Reductions

2011

Uncontrolled VOC Emissions =	0.73032 tpd VOC	Uncontrolled NOx Emissions =	0.15375 tpd NOx
@ 80% compliance =	0.14606 tpd VOC	@ 80% compliance =	0.03075 tpd NOx
Total Reductions =	0.58426 tpd VOC	Total Reductions =	0.12300 tpd NOx

2018

Uncontrolled VOC Emissions =	0.84124 tpd VOC	Uncontrolled NOx Emissions =	0.17710 tpd NOx
@ 80% compliance =	0.16825 tpd VOC	@ 80% compliance =	0.03542 tpd NOx
Total Reductions =	0.67299 tpd VOC	Total Reductions =	0.14168 tpd NOx

2018

Implementation Schedule and Status

State regulation to restrict open burning during the ozone season will be expanded to cover the new jurisdictions involved. This regulatory revision process has begun.

Control Measure: State CTG Cutback Asphalt Regulation

Measure Name:	State Cutback Asphalt Regulation	Description:						
VOC		This measure involves the restriction of the use of cutback asphalt and was applied to 2 new Richmond jurisdictions (Petersburg and Prince George).						
<hr/>								
<table border="1"><tr><td></td><td></td></tr><tr><td>Reductions in 2011 (tons/day)</td><td>0.00021</td></tr><tr><td>Reductions in 2018 (tons/day)</td><td>0.00024</td></tr></table> <hr/>					Reductions in 2011 (tons/day)	0.00021	Reductions in 2018 (tons/day)	0.00024
Reductions in 2011 (tons/day)	0.00021							
Reductions in 2018 (tons/day)	0.00024							

Assumptions

- Control already in place in 7 Richmond jurisdictions.
- Assume a 100% control efficiency, and an 80% rule effectiveness.

Emission Reductions

2011

$$\begin{aligned} \text{Uncontrolled VOC Emissions} &= 0.00026 \text{ tpd VOC} \\ \text{Controlled VOC Emissions} &= 0.00005 \text{ tpd VOC} \\ \text{Total Reductions} &= \mathbf{0.00021} \text{ tpd VOC} \end{aligned}$$

2018

$$\begin{aligned} \text{Uncontrolled VOC Emissions} &= 0.00030 \text{ tpd VOC} \\ \text{Controlled VOC Emissions} &= 0.00006 \text{ tpd VOC} \\ \text{Total Reductions} &= \mathbf{0.00024} \text{ tpd VOC} \end{aligned}$$

State regulation to restrict the use of cutback asphalt during the ozone season will be expanded to cover the new jurisdictions involved. This regulatory revision process has begun.

Control Measure: State CTG GRAPHIC ARTS REGULATION

Measure Name: Graphic Arts Controls

Description:

This control was the result of expansion of the graphic art regulation into 2 new Richmond jurisdictions (Petersburg and Prince George).

VOC

Reductions in 2011 (tons/day)	0.07100
Reductions in 2018 (tons/day)	0.08388

Assumptions

- Control already in place in 7 Richmond jurisdictions.
- Assume 75% control efficiency, 80% control effectiveness, and 64% penetration.

Emission Reductions

2011

Uncontrolled VOC Emissions = 0.18489 tpd VOC

Controlled VOC Emissions = 0.11389 tpd VOC

Total Reductions = 0.07100 tpd VOC

2018

Uncontrolled VOC Emissions = 0.21844 tpd VOC

Controlled VOC Emissions = 0.13456 tpd VOC

Total Reductions = 0.08388 tpd VOC

Implementation Schedule and Status

- State regulation to control graphic art activities will be expanded to cover the new jurisdictions involved. This regulatory revision process has begun.

Control Measure: State CTG Metal Cleaning Solvent Regulation

Measure Name:	Metal Cleaning Solvent Controls	Description:
		This measure involves the extension of the state CTG rule for metal cleaning solvents to 2 Richmond jurisdictions.

VOC

Reductions in 2011 (tons/day)	0.29821
Reductions in 2018 (tons/day)	0.34509

NOX

Reductions in 2011 (tons/day)	N/A
Reductions in 2018 (tons/day)	N/A

Assumptions

- Control already in place in 7 Richmond jurisdictions.
- Assume a 32% control efficiency.

Emission Reductions

2011

Uncontrolled VOC Emissions= 0.54071 tpd VOC
Controlled VOC Emissions = 0.24250 tpd VOC
Total Reductions = 0.29821 tpd VOC

2018

Uncontrolled VOC Emissions = 0.62746 tpd VOC
Controlled VOC Emissions = 0.28237 tpd VOC
Total Reductions = 0.34509 tpd VOC

- State regulation to control solvent cleaning operation will be expanded to cover the new jurisdictions involved. This regulatory revision process has begun.
-

9. Regional Ozone Modeling Analyses

The modeling analyses presented in support of the petition for the reclassification of the Richmond-Petersburg nonattainment area were conducted by two planning organizations:

- The Association for Southeastern Integrated Planning (ASIP)
- The Ozone Transport Commission (OTC)

Virginia is a participating member in OTC and ASIP and has extracted the most recent CMAQ modeling results that have been provided by these organizations. These modeling platforms have been developed through a collaborative process that will be used as the basis for 8-hour ozone attainment demonstration in the Eastern United States.

The following modeling protocol documents provide details on the regional modeling analyses:

- Draft Report - Modeling Protocol For Association for Southeastern Integrated Planning (ASIP) Emissions and Air Quality Modeling to Address 8-Hour Ozone and PM2.5 Nonattainment in the Southeastern United States (ENVIRON International Corporation and Alpine Geophysics LLC) (January 31, 2006)
- A Modeling Protocol for the OTC SIP Quality Modeling System For Assessment of the Ozone National Ambient Air Quality Standard in the Ozone Transport Region (The Modeling Committee of the Ozone Transport Commission (May 6, 2006)

The procedures set forth in these protocols have been developed in accordance with the Guidance on the Use of Models and Other Analyses in Attainment Demonstrations for the 8-hour Ozone NAAQS (EPA-454/R-05-002, October 2005).

9.1. Modeling Attainment Test

The modeled attainment predicts whether or not all estimated future design values will be less than or equal to the concentration level specified in the ozone NAAQS under meteorological conditions similar to those which have been simulated.

The modeled attainment test applied at each monitor in the Richmond-Petersburg area is performed using the following equation as recommended by EPA:

$$(DVF)_i = (RRF)_i(DVC)_i$$

Where:

$(DVC)_i$ = the baseline concentration monitored at site i , in ppb

$(RRF)_i$ = the relative reduction factor, calculated near site i

$(DVF)_i$ = the estimated future design value for the time attainment is required, in ppb.

Current design values are calculated using the average of the three design value periods which include the baseline inventory year. Specifically, the average design values are calculated using the 2000-2002, 2001-2003, and 2002-2004 periods. The current design value calculations for the Richmond-Petersburg area monitors are presented in the Table 9.1-1.

Table 9.1-1 Attainment Modeling Current Design Value Calculations

Monitors		Observed Design Values (ppb)			5-yr Attainment Modeling Current Design Value (ppb)
County/City	AIRS ID	2000-2002	2001-2003	2002-2004	2000-2004
Chesterfield	510410004	86	86	82	84.7
Henrico	510870014	90	90	85	88.3
Hanover	510850003	---	94	90	92.0
Charles City	510360002	90	91	87	89.3

A 3x3 array of grid cells surrounding each monitor is used in the modeled attainment test for the 12-km grid resolution modeling to calculate RRFs. It is important to note that the 2018 ASIP modeling results presented in this report were conducted at a 36-km resolution. Therefore, the RRF calculations utilize the exact grid cell location for each monitor as opposed to the grid cell array for the 12-km resolution modeling.

The predicted 8-hour daily maximum concentrations from each modeled day are used in the modeled attainment test with the nearby grid cell with the highest predicted 8-hour daily maximum concentration with baseline emissions for each day considered in the test, and the grid cell with the highest predicted 8-hour daily maximum concentration with the future emissions for each day in the test.

The RRFs used in the modeled attainment test are computed by taking the ratio of the mean of the 8-hour daily maximum predictions in the future to the mean of the 8-hour daily maximum predictions with baseline emissions, over all relevant days.

To avoid overestimates of future design values and provide for more robust RRFs and future design values, the following rules are applied to determine the number of days and the minimum threshold at each ozone monitor:

- If there are 10 or more days with daily maximum 8-hour average modeled ozone > 85 ppb an 85 ppb threshold is used.
- If there are less than 10 days with daily maximum 8-hour average modeled ozone > 85 ppb the threshold is reduced to as low as 70 ppb until there are 10 days in the mean RRF calculation.
- If there are less than 10 days with daily maximum 8-hour average modeled ozone > 70 ppb then all days > 70 ppb are used.
- No RRF calculations are performed for sites with less than 5 days > 70 ppb.

9.2. 2009 Modeling Results

The ASIP and OTC modeling results presented below have been conducted for 2009 with the objective of demonstrating that the measures adopted as part of the State Implementation Plan will result in attainment of the ozone standard by June 15, 2010.

Table 9.2-1 Association for Southeastern Integrated Planning (ASIP) 2009 Modeled Attainment Test Results for Monitors in the Richmond-Petersburg Area ⁽¹⁾

Monitors		Modeled Average Base-Year (2002) Daily 8-hr Maximum Ozone (ppb)	Modeled Average Future-Year (2009) Daily 8-hr Maximum Ozone (ppb)	Relative Reduction Factor (RRF)	5-yr Attainment Modeling Current Design Value (2000-2004) (ppb)	2009 Projected Future Design Value (ppb)
Chesterfield	510410004	88.9	80.7	0.908	84.7	76.9
Henrico	510870014	91.8	83.1	0.905	88.3	79.9
Hanover	510850003	89.5	80.5	0.899	92.0	82.7
Charles City	510360002	91.7	83.3	0.908	89.3	81.1

⁽¹⁾ Modeling conducted at 12-km horizontal grid resolution using ASIP Base F4 emissions.

**Table 9.2-2 Ozone Transport Commission (OTC)
2009 Modeled Attainment Test Results for Monitors in the Richmond-Petersburg Area⁽²⁾**

Monitors		Modeled Average Base-Year (2002) Daily 8-hr Maximum Ozone (ppb)	Modeled Average Future-Year (2009) Daily 8-hr Maximum Ozone (ppb)	Relative Reduction Factor (RRF)	5-yr Attainment Modeling Current Design Value (2000-2004) (ppb)	2009 Projected Future Design Value (ppb)
Chesterfield	510410004	96.0	87.4	0.910	84.7	77.1
Henrico	510870014	93.3	84.6	0.907	88.3	80.1
Hanover	510850003	93.2	83.5	0.896	92.0	82.4
Charles City	510360002	94.5	86.2	0.912	89.3	81.4

⁽²⁾ Modeling conducted at 12-km horizontal grid resolution using OTC Version 2 emissions.

The ASIP and OTC 2009 modeling results demonstrate that the predicted 8-hour future design values for the Richmond-Petersburg area monitors are expected to be in compliance with the ozone NAAQS (0.08 parts per million) by June 15, 2010.

9.3. 2018 Modeling Results

The ASIP and OTC modeling results for 2018 are being provided to support the 10-year Maintenance Plan for the Richmond-Petersburg area.

**Table 9.3-1 Association for Southeastern Integrated Planning (ASIP)
2018 Modeled Attainment Test Results for Monitors in the Richmond-Petersburg Area⁽³⁾**

Monitors		Modeled Average Base-Year (2002) Daily 8-hr Maximum Ozone (ppb)	Modeled Average Future-Year (2018) Daily 8-hr Maximum Ozone (ppb)	Relative Reduction Factor (RRF)	5-yr Attainment Modeling Current Design Value (2000-2004) (ppb)	2018 Projected Future Design Value (ppb)
Chesterfield	510410004	88.3	70.1	0.794	84.7	67.3
Henrico	510870014	92.1	71.1	0.772	88.3	68.2
Hanover	510850003	92.1	71.1	0.772	92.0	71.0
Charles City	510360002	92.1	71.1	0.772	89.3	68.9

⁽³⁾ Modeling conducted at 36-km horizontal grid resolution using ASIP Base F4 emissions.

**Table 9.3-2 Ozone Transport Commission (OTC)
2018 Modeled Attainment Test Results for Monitors in the Richmond-Petersburg Area⁽⁴⁾**

Monitors		Modeled Average Base-Year (2002) Daily 8-hr Maximum Ozone (ppb)	Modeled Average Future-Year (2018) Daily 8-hr Maximum Ozone (ppb)	Relative Reduction Factor (RRF)	5-yr Attainment Modeling Current Design Value (2000-2004) (ppb)	2018 Projected Future Design Value (ppb)
Chesterfield	510410004	96.0	79.6	0.829	84.7	70.2
Henrico	510870014	93.3	76.2	0.817	88.3	72.1
Hanover	510850003	93.2	74.9	0.804	92.0	74.0
Charles City	510360002	94.5	78.5	0.831	89.3	74.2

⁽⁴⁾ Modeling conducted at 12-km horizontal grid resolution using OTC Version 2 emissions.

These results provide assurance that the Richmond-Petersburg area will continue to meet the 8-hour ozone NAAQS for the next 10 years through 2018.

9.4. Conclusions

The referenced modeling exercises support the petition for the reclassification of the Richmond-Petersburg 8-hour ozone nonattainment area to an attainment area in that:

- All of the modeling evidence presented from ASIP and OTC shows that the Richmond-Petersburg area will continue to experience lower ozone levels and will attain the 8-hour standard by June 15, 2010.
- Continued attainment and further decreasing ozone levels are predicted for the Richmond-Petersburg area for the next 10 years (2018).